2008

Effectiveness of an educational intervention on the attitudes toward sport psychology of athletic training students

Damien Clement
West Virginia University

Effectiveness of an Educational Intervention on the Attitudes Toward Sport Psychology of Athletic Training Students

Damien Clement, M.S., M.A., ATC

Dissertation submitted to
the School of Physical Education
at West Virginia University
in partial fulfillment of the requirements
for the degree of

Doctor of Philosophy
in
Kinesiology
with an emphasis in Sport and Exercise Psychology

Andrew Ostrow, Ph.D., Chair
Vince Stilger, HSD, ATC
Roy Tunick, Ed.D.
Jack Watson, Ph.D.
Sam Zizzi, Ed.D.

School of Physical Education

Morgantown, West Virginia
2008

Keywords: Attitudes Toward Sport Psychology, Educational Intervention,
Sport Psychology Behaviors, Confidence in Sport Psychology Consulting,
Athletic Training Students

ABSTRACT

Effectiveness of an Educational Intervention on the Attitudes Toward Sport Psychology of Athletic Training Students

Damien Clement, M.S., M.A., ATC

Although previous research of athletes' attitudes toward sport psychology consulting (Anderson et al. 2004, Martin, 2005) has proven its usefulness, the literature seems to be lacking any similar assessment of athletic training students' attitudes toward sport psychology. Neither has the effectiveness of an educational intervention been assessed with regard to athletic training students' attitudes toward sport psychology. This is surprising given the important role that sport psychology plays in injury rehabilitation. As a result, the primary aim of the current study was to assess the attitudes of athletic training students toward sport psychology and, subsequently, determine the effectiveness of an education intervention on their attitudes toward sport psychology. A secondary aim was to determine the effectiveness of the educational intervention on athletic training students' sport psychology behaviors. Athletic training students (N = 160) were assessed using a modified version of the Sport Psychology Attitudes-Revised Form (Martin et al. 2002). Athletic training students' attitudes toward sport psychology were also evaluated with respect to their gender and experience with sport psychology. Results revealed that female athletic training students scored significantly lower on the cultural preference scale (M = 3.57, SD = 1.11) than their male counterparts (M = 3.91, SD = 0.90), t (157.9) = 2.14, $p < 0.05$, ES = 0.14. Furthermore, females also scored significantly lower on the personal openness scale (M = 4.47, SD = 0.91) when compared to males (M = 4.96, SD = 0.95), t (158) = 3.6, $p < 0.05$, d = 0.3. Additionally, athletic training students who had experience with sport psychology scored significantly higher on confidence in sport psychology consulting (M = 4.67, SD = 0.74) than those who had no previous experience (M = 4.38, SD = 0.90), t (158) = 2.26, $p < 0.05$, d = 0.2). When a series of 2 X 3 repeated measures ANOVAs were computed to determine the differential effect of the educational intervention on athletic training students' attitudes, scores on the confidence in sport psychology consulting scale significantly increased for the members of the experimental group from pre-test to post-test. F (1.17, 316) = 6.86, $p < .01$, ES = .04. Additionally, a 2 X 2 repeated measures ANOVA was conducted to determine the effectiveness of the educational intervention on sport psychology behaviors revealed that members of the experimental group reported a significant increase in their reported use of sport psychology behaviors when compared to those in the control group F (1, 158) = 496, $p <$ .01, ES = .75. The practical implications of these results will be discussed within the context of injury rehabilitation.

ACKNOWLEDGEMENTS

The completion of a doctoral dissertation is indeed a significant milestone in any doctoral student's academic career. It not only serves as the culmination of years of hard work, dedication, perseverance and the ability to overcome obstacles but also signifies the end of an individual's tenure as a student.
Although my ability to complete my dissertation entailed a great deal of work on my part quite a number of individuals must be acknowledged for their help throughout this process.

Words cannot express the high regard with which I hold my advisor, chair and mentor Dr. Andrew C. Ostrow. His insight, patience, knowledge and guidance throughout this process was unparalleled. Furthermore, the time and effort Dr. Ostrow dedicated to me throughout my tenure as a graduate student has played a significant role in not only my ability to successfully progress through graduate school but also complete my dissertation. Dr Ostrow, if I could be half as good a professor as you were throughout your time at West Virginia University I know would be decent professor.

I would also like to thank Dr. Sam Zizzi for serving on my committee. Dr Zizzi, you always made time for me when I had statistical questions. Never once did you turn me away. Most importantly, you helped instilled in me the self-confidence that I actually have a fairly good statistical base. Scary isn't it? Thank you again for your help and guidance throughout my time here at West Virginia University.

Dr. Jack Watson, what can I say other than thank you very much. You especially challenged me throughout my dissertation process. However, I always knew that you had my best interest at heart. Thank you for your encouragement to become more involved in AASP. Without the "master plan" I would not have been as involved as I was. Thank you again for being you and as well for your mentorship throughout my graduate school career.

Vince, I am very grateful for your willingness to be a part of my doctoral committee. Your feedback about my ideas during the initial stages of my dissertation was extremely valuable and helpful. Your constant inquiry about my progress also kept me on track. Thank you very much.

Dr. Tunick I would like to thank you for your help, feedback and support with my dissertation. I appreciate the time you took out of your busy schedule to serve on my committee. I would also like to acknowledge your insightful and knowledgeable comments as well as guidance throughout this process.

A special acknowledgement and great depth of gratitude must be made to Jennifer McIntosh of the Office of Social Justice. You provided me with that strong motherly voice I needed at times to ensure I stayed focused. Furthermore, the support your office provided me throughout my time as a graduate student for not only my assistantship but also conference attendance as well as data collection was greatly appreciated. I would

venture to say that without your support my graduate experience would not have been as meaningful and productive as it turned out to be. You are a true advocate for minority students in higher education. I would also like to acknowledge Sharon Mallow also of the Social Justice Office. You took care of my requests and ensured that none of them were turned down. Without you, my dissertation and ability to obtain funding for my various endeavors would not have been possible.

I would also like to extend a since thank you to the program directors and well as athletic training students who participated in this study. Without their openness to allow me access to the athletic training students in their Athletic Training Education Program this study would not have been possible.

I would also like to thank my friends, colleague and alumni of the West Virginia University Sport and Exercise Psychology Program. The many words of wisdom and encouragement I received from you all surely made this process seem achievable.

Nuff respect must also be extended to Fiesto, Wutless and Ras. Without allyuh fellas this thing would not be possible. Allyuh ensure that when we was liming ah wasn't studying school at all. Quasi as allyuh does call meh is ah name that go stick. A man always have to have good brethrens and allyuh was that for me. Prreciate it and yuh know it!!!

Finally, I would like to thank my Lord and Savior Jesus Christ. Without him I would not have been able to complete my dissertation or graduate school for that matter. All the praise and glory to him and with his blessing and wishes I will continue to succeed in life.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Effectiveness of an Educational Intervention on the Attitudes Toward Sport Psychology of Athletic Training Students

Ravizza (1988) suggested that the reluctance by coaches and athletes to utilize sport psychology services could primarily be due to the "negative connotations, lack of sport specific knowledge and inadequate knowledge of and experience with the politics of the sport environment" (p. 244). Likewise, sports medicine professionals- more specifically, athletic trainers- also reflect this assertion since their unwillingness to incorporate and further make use of sport psychology within their treatment and rehabilitation protocols has been attributed to their "lack of knowledge of sport psychology and its application to the athletic training profession" (National Athletic Trainers Association, 1994, p. 74). Anderson, Hodge, Lavallee, and Martin (2004) further suggested that it is quite possible that athletes, coaches, and sport medicine professionals' lack of willingness to utilize sport psychology could be influenced by the attitudes they hold toward sport psychology services.

According to Noe (2002), attitudes are a "combination of beliefs and feelings that predispose a person to behave a certain way" (p.108). These attitudes, according to Fine (1992), are fluid as opposed to hardened or crystalline. Pettijohn (1989) also asserted that attitudes inherently guide individuals toward specific behaviors. Thus, an evaluation of attitudes within the context of the theory of reasoned action (TRA; Ajzen, 1985; Fishbein & Ajzen, 1975) merits investigation since attitudes, which ultimately influence behaviors, can be formed based on factual or actual ideas. Anderson et al. (2004) support this assertion since they stated that an examination of the relationship between attitudes and subsequent behaviors could be valuable to sport psychology practitioners. However, despite the apparent importance of attitudes within the context of the TRA (Ajzen, 1985;

Fishbein & Ajzen, 1975), the literature appears to be lacking studies regarding athletic training students' attitudes toward sport psychology services.

Athletic training students spend a great deal of time in close proximity to injured athletes at the collegiate level. Furthermore, due to the similarity in ages and college experiences, athletic training students are easily able to build rapport with injured athletes during injury management and rehabilitation (Doyle, 2002). Thus, the potential exists that, with some knowledge and training, in the absence of a trained sport psychology professional, athletic training students are in an ideal position to possibly incorporate basic and suitable psychological skills and techniques within the rehabilitation context (Ford & Gordon, 1997). Furthermore, their accessibility to this population is moreso intriguing when one considers the many documented benefits that have been gained from the incorporation of goal setting (Ievleva & Orlick, 1991), imagery and relaxation (Cupal & Brewer, 2001) and positive self talk (Scherzer et al., 2001) into injury rehabilitation programs.

Consequently, given athletic training students position within the sports medicine team, an assessment of their attitudes toward sport psychology services could be beneficial. This assessment of athletic training students' attitudes could provide sport psychology practitioners with information about their attitudes as well as their intentions to utilize sport psychology services. Martin (2005) supports the aforementioned suggestion since it was stated that such an assessment could help sport psychology professionals promote positive attitudes about field. Moreover, using the theoretical framework of the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975), attitudes is one of the basic determinants that influences intentions, which is the sole predictor of an

individual's behavior. As a result, it is possible that increased positive attitudes could positively impact intentions to use sport psychology, which should ultimately influence athletic training students' incorporation and utilization of basic sport psychology skills and techniques within their rehabilitation programs.

Studies conducted assessing athletes' attitudes toward sport psychology services (Anderson et al., 2004; Harmison, 2000; Martin, 2005; Martin, Kellmann, Lavallee, & Page, 2002; Martin, Wrisberg, Beitel, & Lounsbury, 1997; Wrisberg & Martin, 1994) and coaches' attitudes toward sport psychology services (Schell, Hunt & Lloyd, 1984; Silva, 1984; Sullivan & Hodge, 1991; Tierney, 1988; Zakrajsek & Zizzi, 2008) have helped provide insight about some possible barriers both athletes and coaches may encounter with regard to utilizing sport psychology services. However, where a glaring gap seems to exist within the current literature is a lack of documented assessments of the attitudes of athletic training students toward sport psychology. As a result, a systematic approach will be utilized in evaluating research that has been conducted with athletic trainers' and athletes' attitudes.

Athletic Trainers' Attitudes Toward Sport Psychology

Despite the apparent void that seems to be present in the current literature with respect to documented assessments of athletic training students' attitudes toward sport psychology, limited research exists with regard to athletic trainers' attitudes. Presently, four studies have partially explored the attitudes that athletic trainers have toward sport psychology. Of these four studies, two were recently conducted, thus more focus will be placed on them. However, the assessment of attitudes was only small components of each of these studies. Furthermore, none of these studies utilized a psychometrically validated

instrument to assess the attitudes of the samples of athletic trainers. Consequently, it can be concluded that the results of these studies may not represent an accurate assessment of athletic trainers' attitudes toward sport psychology.

Ballek (2002) assessed the attitudes and beliefs of athletic trainers (*N*=1,520) utilizing a cross-sectional comparative method via a self-constructed 19-item survey. Results from this study revealed that female athletic trainers expressed an overall positive attitude toward sport psychology. That is, females were more likely than males to agree that athletic trainers should have knowledge of sport psychology, that sport psychology interventions could be beneficial with injured athletes, and an increased desire for more sport psychology education.

Gotsch (2003) also assessed the attitudes of athletic trainers (*N*= 2,499) with regard to formal sport psychology education. Similar to the aforementioned Ballek (2002) study, the assessment of attitudes in this research study utilized a revised version of Ballek's (2002) instrument, while also being a small component of a much larger study. Results partially supported the findings of Ballek (2002). Participants indicated that athletic trainers should have knowledge about sport psychology and that sport psychology interventions could assist athletes during their rehabilitation. However, unlike Ballek (2002), no gender differences were found.

These studies with regard to athletic trainers' attitudes toward sport psychology are minimal in comparison to the research that has been conducted with regard to athletes' attitudes toward sport psychology. Furthermore, a psychometrically sound instrument, the Sport Psychology Attitudes-Revised (SPA-R; Martin, Kellman, Lavallee, & Page, 2002), has been developed to assess athletes' attitudes toward sport psychology.

Among the prominent studies conducted assessing athletes' attitudes toward sport psychology were those done by Martin (2005) and Anderson et al. (2004).

Athletes' Attitudes Toward Sport Psychology

Martin (2005), in a study among high school athletes (*N*= 362) and college student athletes (*N*=431), utilized the SPA-R to assess attitudes toward sport psychology. Results from the study revealed that male athletes, both high school and college, reported significantly higher ratings on the stigma tolerance scale when compared to their female counterparts. Female athletes, on the other hand, were found to be more tolerant of working with consultants from a variety of ethnic backgrounds. Furthermore, individuals who have been previously exposed to sport psychology displayed a more positive attitude toward sport psychology when compared to those who had not been exposed.

Anderson et al. (2004) also used the SPA-R to assess elite New Zealand athletes' (*N*= 112) attitudes toward sport psychology. Participants indicated a positive attitude toward sport psychology (low scores on stigma tolerance and low scores on personal openness), confidence toward sport psychology, and an inclination to work with a consultant who had a similar background to their own. Female athletes were found to be more open toward sport psychology than male athletes in addition to being more confident about the usefulness of sport psychology. Previous experience working with a sport psychologist was also found to significantly influence attitudes toward sport psychology. The authors also postulated that it would be helpful to assess athletes' attitudes in order to gain a better understanding of their intention to utilize sport psychology services. Thus, from the aforementioned studies, it could be surmised that assessing the attitudes that athletes hold toward sport psychology could help sport

psychology professionals promote positive attitudes about sport psychology (Martin, 2005).

Consequently, it may be that athletic training students' gender (Martin, 2005) and previous experience with sport psychology (Anderson et al., 2004) could influence their attitudes toward sport psychology. According to the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975), these attitudes, formed from personal or non-personal experiences, can directly influence behavior (Theodorakis, 1994). Furthermore, Theodorakis (1994) also stated that information and knowledge also play an important role in the attitude-behavior relationship. Thus, given the fluidity of attitudes (Fine, 1992), it stands to reason that attitude change can be achieved via the use of verbal communication through the administration of an educational intervention aimed at an athletic training student's attitudes (Tannenbaum, 1967). Furthermore, the literature has also documented the success of attitudinal change via the administration of educational interventions (Golin, 1970; Kindeberg & Christensson, 1994; Krahe & Altwasser, 2006; Roeher, 1961). Modification of attitudes toward sport psychology has the potential to increase the incorporation and utilization of sport psychology within the rehabilitation context. According to the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975), attitude is one of the basic determinants that influence intentions, and is the sole predictor of an individual's behavior.

Modifying Attitudes Toward Sport Psychology

Although the administration of any such educational interventions to help modify the attitudes of athletic training students toward sport psychology has not been extensively documented in the literature Zakrajsek and Zizzi (2008) have done some

seminal work in this area, albeit with swim coaches. Using a sample of (N = 90) the authors investigated the impact of a sport psychology workshop on coaches' attitude about sport psychology Results revealed that participants, post workshop, seemed to be more open toward using sport psychology services. However, the aforementioned study seems to be the only documented case with regard to modifying attitudes in the sport psychology area. A few studies, however, have focused on changing attitudes via the use of educational interventions albeit primarily within the physical disabilities and AIDS epidemic arenas (Golin, 1970; Kindeberg & Christensson, 1994; Krahe & Altwasser, 2006; Roeher, 1961). Halloran (1967), supported the aforementioned assertion, indicating that it is possible to achieve attitude change by providing information. However, Halloran (1967) also stated that attitude change is contingent upon the individual presenting the information, how the individual is perceived, the delivery of the information and how the information could be used by recipients.

Some research, though, has been conducted using Osgood and Tannenbaum's (1955) congruity theory with regard to attitudinal change. This theory postulates that attitude change is possible via the use of persuasive communication from a relevant and credible source. Rokeach and Rothman (1965) demonstrated the effectiveness of the individual delivering the message as well as the message itself in affecting attitude change. Kerrick (1958) also supported the use of the congruity theory in predicting attitude change when the source delivering the message was perceived as being prestigious. Thus, given the impact of information within the context of the congruity theory, the author believes that attitude change among athletic training students could be possible after the administration of an educational intervention.

Athletic Trainers and Sport Psychology Education

Educational interventions appear to be warranted given that Wiese and Weiss (1987) asserted that athletic trainers, and by extension athletic training students, lack in-depth knowledge about sport psychology and its application to athletic training. This lack of training and knowledge has led to athletic trainers and athletic training students not perceiving themselves as being competent in utilizing sport psychology techniques within the rehabilitation context (Gordon, 2002). Larson, Starkey, and Zaichkowsky (1996) found that 85% of athletic trainers surveyed felt that a course in sport psychology would be extremely important in their ability to provide optimum physical and psychological care for their injured athletes. More recently, Gordon (2002) also found that athletic trainers reported a deficit in their training with regard to sport psychology.

Although the concept of adding courses to increase exposure to sport psychology seems to be a good idea, the feasibility and practicality of that suggestion can be debated. However, Pero (1995) found that in using a five-hour workshop format, participating athletic trainers retained the psychological skills and strategies up to one year after initially attending the workshop. Scherzer (2004) also suggested that athletic training students were more likely to participate in and gain knowledge that could influence attitudes if this information was incorporated during a pre-scheduled classroom time. Thus, informal sessions such as workshops have the potential to provide athletic training students with the knowledge that can ultimately positively influence their attitudes and intentions and behaviors with regard to sport psychology.

The current study represents the first documented use of the SPA-R in assessing attitudes after the administration of an educational intervention about sport psychology

services. Limited research by Zakrajsek (2007), however, using a shortened version of the Sport Psychology Attitude-Revised Coaches (SPA-RC), a modified version of the SPA-R, has shown the utility of this instrument. Results from this pilot study indicated that significant differences were apparent post-intervention (a workshop focusing on coaches' attitudes, expectations, barriers, and access to sport psychology services) for coaches (attending a national convention ($N = 28$) on only one of the four attitudinal scales of the SPA-RC. This scale was confidence in sport psychology consulting. The other scales, stigma tolerance, personal openness and cultural preference yielded no significant differences. However, Zakrajsek and Zizzi (2008), in a follow up study, using a sample of ($N = 90$) coaches found that the personal openness scale could also be affected by the administration of a sport psychology workshop. Thus, it appears that of the four attitudinal scales associated with the SPA-RC only confidence in sport psychology consulting and personal openness have been shown to be amendable to change as a result of an education intervention.

Anderson et al. (2004) supported the findings of the aforementioned study using the SPA-R to assess attitudes using the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975) and the theory of planned behavior to determine the effectiveness of attitudes on intentions to use sport psychology services. Results revealed that the variables of the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975) accounted for 38% of the intention to use sport psychology with only the confidence in sport psychology consulting scale of the SPA-R being a significant predictor of intentions. Thus, the authors concluded that only the confidence in sport psychology consulting scale assesses attitudes' influential on intentions that can ultimately influence behaviors with regard to sport psychology.

Therefore, due to the absence of any documented studies in addition to the findings of Ballek (2002) and Gotsch (2003), an assessment of attitudes toward sport psychology services among athletic training students, driven by the TRA (Ajzen, 1985; Fishbein & Ajzen, 1975), appears to be warranted. Furthermore, the impact of an educational intervention on the aforementioned attitudes also needs to be evaluated given the documented effects information can have on attitudes. As a result, the main research questions for the current study were: (1) Will males and female athletic training students have differing attitudes on the pre-test toward sport psychology services? (2) Will previous experience with sport psychology differentiate between athletic training students' attitudes on the pre-test toward sport psychology services? (3) What impact will an educational intervention have on athletic training students' attitudes toward sport psychology services? (4) What impact will an educational intervention have on athletic training students' sport psychology behaviors such as speaking to an athlete about sport psychology, seeking out more information about sport psychology, and so forth.

Methods

Participants

Athletic training students (N=160) enrolled in Commission on Accreditation of Athletic Training Education (CAATE) programs from small to medium sized Mid Atlantic Division II institutions (N=10) were recruited to participate in the study during the fall semester of 2007. Initially, the researcher's target population was all athletic training students enrolled in CAATE programs. However, the accessible population, due to location restrictions, was limited to CAATE accredited programs in West Virginia, Pennsylvania and Ohio. The final sample of institutions (N=10) represented the

programs whose directors agreed to allow their athletic training students to participate in the study. Two institutions that had previously agreed to participate in the study later declined due to scheduling difficulties. Inclusion criteria for participation in the current study called for participants to be enrolled in a CAATE accredited program, as well as having achieved either junior or senior standing. Initially, the sample size was larger (*N* =167), however, seven surveys were not used in the data analyses due to missing responses on the questionnaires.

Males made up 44.4% of the sample whereas females made up 55.6% of the sample. In addition, 49.4% of the participants indicated they were presently juniors while 50.6% stated they were seniors. When participants were asked about their previous sports participation, 21.3% indicated they had played basketball, 12.5% played football, 11.9% played softball, while 12.5% indicated they had no previous sporting experience. With regard to the sample's athletic training clinical experience, 38.8% of the sample had worked with baseball, 36.3% with basketball, and 18.8% with football.

When asked about their experience with sport psychology 93.1% of the participants reported they had not worked with a sport psychology consultant. However, 53.1% had taken or were currently enrolled in a course in sport psychology, and 69.4% had taken or were currently enrolled in a course addressing the psychological aspects of injury. Furthermore, 98.1% of the sample had taken or were currently enrolled in a psychology course while 35% of the sample stated they had access to a sport psychology consultant. Overall, 49.4% of the sample indicated they had previous exposure to sport psychology. Please refer to Table 1 for additional demographic information.

Research Design

This study utilized a quasi-experimental design. More specifically, a non-equivalent control group repeated measures design was employed to determine the effectiveness of an educational intervention on athletic training students' attitudes toward sport psychology services. The dependent variables for this study were the response scores on the four scales of the SPA-R instrument (i.e., Confidence in Sport Psychology Consulting, Stigma Tolerance, Personal Openness and Cultural Preference) (Martin et al., 2002) and composite scores on a sport psychology behaviors instrument. The classification variables included gender, participants' previous experience with a sport psychology consultant, previous or current enrollment in a sport psychology course and/or psychology course and previous experience with sport psychology. The independent variables were placement in either the treatment or control group, and time of assessment (e.g. pre-intervention, post-intervention, and six-weeks post-intervention). Participants were randomly assigned by junior versus senior class standing within each institution to either the treatment group or the control group.

Instruments

Attitudes Toward Sport psychology Consulting

Athletic training students' attitudes toward sport psychology consulting were assessed using the Sport Psychology Attitudes-Revised form (Martin et al., 2002). Permission was obtained from the principal author prior to using this instrument in the current study. Permission was also obtained, from the principal author, to revise the instructions for completing the SPA-R. The revisions read as follows: "The first instrument in your packet is the SPA-R and was originally designed to assess the attitudes

that athletes hold toward sport psychology and sport psychology consulting. I would like you to put yourself in the position as if you were an athlete on any of the athletic teams you have worked with, and use this viewpoint to complete this instrument."

The SPA-R consisted of 25 items distributed among four scales: Stigma Tolerance (7 items), Confidence in Sport Psychology Consulting (8 items), Personal Openness (6 items), and Cultural Preference (4 items). The stigma tolerance scale measured athletes' belief that others will label them as having psychological problems if they use a sport psychologist. The confidence in sport psychology consulting scale assessed athletes' beliefs about the usefulness of sport psychology and mental training. The personal openness scale measured athletes' openness to discuss their problems and concerns with a sport psychology consultant. Lastly, the cultural preference scale measured the degree to which athletes identify with their own culture and their preference to work with a consultant possessing a similar background. Participants responded to these items on a 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree" depending on their interpretation of the items with regard to their attitudes toward sport psychology consulting.

Cronbach alpha reliability coefficients of 0.84 (stigma tolerance), 0.82 (confidence in sport psychology consulting), 0.61 (personal openness), and 0.66 (cultural preference) were reported for the SPA-R (Martin et al. 2002). Test-retest reliability over an eight-week period was found to be 0.90 (stigma tolerance), 0.83 (confidence in sport psychology consulting), 0.71 (personal openness), and 0.70 (cultural preference) (Martin et al., 2002). A follow-up confirmatory factor analysis revealed that the four-factor model was adequately stable and consistent across groups and countries. Furthermore, this

indicated that the items on the SPA-R measured essentially the same factors in each group (Martin et al., 2002).

Self Stigma of Seeking Help Scale

Self stigma exhibited by each participant was evaluated using Vogel, Wade, and Haake's (2006) Self Stigma of Seeking Help Scale (SSOSH). This instrument measured the perception that seeking help from a mental health professional will threaten one's self regard, confidence, and overall worth as a person. The primary purpose for the inclusion of this instrument in the study was to serve as a convergent validity check for the stigma tolerance scale on the SPA-R. Permission to use this instrument was obtained from the principal author prior to the commencement of the study. The SSOSH consisted of 10 items on which the respondents were asked to rate their perception of self stigma using a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree." Higher scores were thought to reflect a higher degree of self stigma. Internal consistency of the 10 items was found to be 0.91. Test-retest reliability over a two-month time period was found to be 0.72, indicating that the measure had good test-retest reliability (Vogel et al., 2006).

Criterion validity was assessed by comparing the total scores on the SSOSH with the total scores on the ATSPPHS and the Intentions to Seek Counseling Inventory (ISCS; Cash, Begley, McCown, & Wiese, 1975). Statistically significant results were revealed. Lastly, predictive validity of the SSOSH was also assessed to determine if scores would discriminate between those who sought psychological help from those who did not over a two-month time period (Vogel at al., 2006). Results revealed that the SSOSH did significantly make a distinction between those who sought psychological help and those

who did not (X^2 (1, 654) = 5.05, p = .025), canonical correlation = .09 (Vogel et al., 2006).

Sport Psychology Behaviors

This self-constructed instrument was used to determine what, if any, sport psychology behaviors athletic training students engaged in prior to and after the administration of an educational intervention. The questions on this instrument included "Have you spoken to an athlete about sport psychology?", "Have you sought out more information about sport psychology?", "Have you referred an injured athlete to a sport psychologist?", "Have you referred an injured athlete to a counselor?", and "Have you used applied sport psychology techniques in your rehabilitation with athletes?" Participants' responses were tabulated using two methods. First, percentage scores based on "Yes" and "No" responses for each of the sport psychology behaviors were calculated. Composite scores, based on six-point scales, were calculated for each participant using their responses to the five sport psychology behavior questions. However, only the composite scoreswere used in data analyses.

Procedures

Prior to commencing this study, written approval was obtained from the program directors of 10 institutions within the states of West Virginia, Pennsylvania and Ohio. The study took place within either the junior or senior level athletic training classes at these institutions. The materials used in the study included the SPA-R, the SSOSH, the demographic information sheet and the sport psychology behaviors instrument that were all administered by the researcher prior to the intervention. Immediately post-intervention, the SPA-R was once again administered. Additional follow-up testing using

the SPA-R and the sport psychology behaviors instrument was conducted six weeks post-intervention.

Pretest

Once prospective institutions were identified, the researcher randomly assigned one of the athletic training practicum classes from the participating institutions to either receive the educational intervention or be part of the control group. When the participants at the institution had completed the initial battery of instruments, the control group was dismissed. In order to preserve the integrity of the study and the research design, the participants who were members of the control group signed a statement indicating that they would not engage in any behaviors (that were listed) that could possibly influence their responses to the SPA-R. For example, they were told not to seek out any additional information about sport psychology during the break between pre-test and post-test. Once this was completed, the researcher commenced the educational intervention.

Intervention

The educational intervention delivered to the participants by the researcher was approximately a 50-60 minute workshop. This workshop primarily focused on addressing the four scales of the SPA-R (i.e., Confidence in Sport Psychology Consulting, Stigma Tolerance, Personal Openness, and Cultural Preference). This educational intervention ultimately presented pertinent information about sport psychology to athletic training students and its applicability to the athletic training.

The educational intervention, as previously mentioned, addressed all four scales of the SPA-R. First, confidence in sport psychology consulting was addressed by highlighting research findings supporting the incorporation of sport psychology

interventions into rehabilitation, as well as explaining how sport psychology fits into the athletic training domain. Stigma tolerance and personal openness were addressed by presenting examples of institutions that have successfully incorporated sport psychology into their athletic training programs in addition to case studies emphasizing the specific areas within rehabilitation where sport psychology can be utilized. The researcher also introduced to the participants basic sport psychology techniques such as deep breathing and goal setting, which can be easily incorporated into rehabilitation. Lastly, the cultural preference scale was dealt with using a discussion format about stereotypes and what can be done to address this situation in working with athletes who come from different backgrounds. Please see Appendix I for an outline of the educational intervention.

Post-Intervention Assessment Procedures

The SPA-R was administered by the researcher immediately post-intervention as well as six weeks post-intervention. Sport psychology behaviors were also assessed six weeks post-intervention.

Hypotheses

The following hypotheses were the predictions about the results of this study based on the literature and the intuition of the researcher.

1. Male participants will exhibit on the pretest: high scores on the stigma tolerance and cultural preference scale and female participants will exhibit on the pretest low scores on personal openness and high scores on confidence in sport psychology consulting.
2. Athletic training students with previous sport psychology experience will exhibit more positive attitudes toward sport psychology consulting on the pretest as

compared to athletic training students who have not had previous sport psychology experience.

3. Participants in the experimental group will report (a) decreased scores on the stigma tolerance scale and (b) increased scores on confidence in sport psychology scale immediately post-intervention and retain these changes at the six week follow-up. The other two scales, personal openness and cultural preference, will remain unchanged.
4. Participants in the treatment group will report increased sport psychology behaviors at the six week follow-up.

Results

Cronbach Alphas for SPA-R

Cronbach alpha scores for each of the four scales making up the SPA-R were calculated. Results from these analyses revealed values of 0.82 (confidence in sport psychology consulting), 0.46 (cultural preference), 0.66 (personal openness), and 0.85 (stigma tolerance). It must be noted that the Cronbach alpha scores for the personal openness scale and the cultural preference scale were rather low. However, the Cronbach alpha score for the personal openness scale appears to be consistent with previous literature (Anderson et al., 2004; Lavallee, Jennings, Anderson, & Martin, 2005; Martin et al., 2002). Conversely, the reliability coefficient for the cultural preference scale was much lower than previously reported Cronbach alphas in the literature.

Correlations between participants' scores on the stigma tolerance scale and scores on the SSOSH

A Pearson product moment correlation was calculated between participants' scores on the stigma tolerance scale and their scores on the SSOSH. There was a significant but low relationship between the scores on the stigma tolerance scale and the SSOSH ($r = .22$, $p < .01$), somewhat supporting the convergent validity of the SPA-R. It should be noted that the level of shared variance was very low.

Correlations between classification variables and dependent variables

Correlations coefficients were computed between the participants' scores on the dependent variables and several classification variables: gender, participants' previous experience with a sport psychology consultant, previous or current enrollment in a sport psychology/psychology course, and previous experience with sport psychology. Results indicated no relationships existed between any of the aforementioned variables and the dependent variables with the exception of gender and cultural preference ($r = -0.15$, $p < .05$), gender and personal openness ($r = -0.27$, $p < .01$) and previous experience with sport psychology and confidence in sport psychology consulting ($r = -0.18$, $p < .05$). Thus, no covariates were utilized in the subsequent data analyses of the current study.

Correlations between the dependent variables

The relationships between the dependent variables were evaluated via the computation of correlation coefficients. Results showed significant relationships between cultural preference and stigma tolerance ($r = 0.55$, $p < .01$), cultural preference and personal openness ($r = 0.35$, $p < .01$), and stigma tolerance and personal openness ($r = 0.43$, $p < .01$). Significant, but negative relationships were found between stigma

tolerance and confidence (r = -0.41, p < .01) and personal openness and confidence (r = -0.29, p < .01). Lastly, no relationship was found between cultural preference and confidence. In summary, the analyses yielded low correlations as well as very low levels of explained variances. Consequently, given the aforementioned results with regard to the limited number of relationships between the dependent variables on the SPA-R, it was decided that MANOVAs would not be utilized in the current study to evaluate the hypotheses. Instead, univariate ANOVAs were employed.

Prior to looking at the hypotheses, it is worth mentioning how the current sample's pre-test scores on the SPA-R compared to previously established norms for the instrument. Athletic training students in the current study scored higher on the stigma tolerance scale (M = 3.67) in comparison to the norm (M = 2.76). As a result, it could be speculated that athletic training students in the current sample possessed a more negative attitude toward sport psychology in relation to the norm. On the personal openness scale, athletic training students also scored higher (M = 4.69) when compared to the norm (M = 4.42). Consequently, the author reasons that the current sample appears to be less willing to utilize sport psychology when compared to the student athletes with whom the SPA-R was normed. With regard to the cultural preference scale, participants in the current study also scored lower (M = 3.72) than the norm (M = 3.47). Thus, it could be assumed that athletic training students seemed more inclined to working with sport psychology consultants with backgrounds similar to their own. Last, participants also scored lower on the confidence in sport psychology consulting scale (M = 4.52) in comparison to the norm (M = 4.63) possibly indicating they did not deem sport psychology to very useful to them.

Are athletic training students' scores on the pretest SPA-R scales: confidence in sport psychology consulting, personal openness, stigma tolerance, and cultural preference, differentiated by gender?

Four independent *t*-tests were computed to determine the differential effect of gender on athletic training students' pretest scores on the SPA-R scales. Results revealed that female athletic training students scored significantly lower on the cultural preference scale ($M = 3.57$, $SD = 1.11$) than their male counterparts ($M = 3.91$, $SD = 0.90$), $t\ (157.9) = 2.14$, $p < .05$, $d = .14$. In other words, female athletic training students seemed to be more open than male athletic training students to working with sport psychology consultants from different cultural backgrounds. Furthermore, female athletic training students also scored significantly lower on the personal openness scale ($M = 4.47$, $SD = 0.91$) when compared to male athletic training students ($M = 4.96$, $SD = 0.95$), $t\ (158) = 3.6$, $p < .05$, $d = .3$. Thus, female athletic training students seemed to be more willing, when compared to male athletic training students, to utilize sport psychology services. No mean pretest score differences were found between male and female athletic training students on either the stigma tolerance or confidence in sport psychology consulting scales. It must be mentioned that there were no differences with regard to the distribution of males and females between the experimental and control groups $\chi^2\ (160, 1) = 2.71$, $p = 0.06$, $\Phi = 0.10$.

Are athletic training students' scores on the pre-test SPA-R scales: confidence, personal openness, stigma tolerance, and cultural preference, differentiated by previous experience with sport psychology?

Four independent *t*-tests comparing athletic training students, who had previous experience with sport psychology, on mean scores on the SPA-R revealed that athletic training students who had previous experience with sport psychology scored significantly higher on the confidence in sport psychology consulting scale ($M = 4.67$, $SD = 0.74$) than athletic training students who had no previous experience with sport psychology ($M = 4.38$, $SD = 0.90$), $t\ (158) = 2.26$, $p < .05$, $d = .2$). In other words, athletic training students who had experience with sport psychology believed that the use of sport psychology could be helpful. Previous experience with sport psychology did not differentiate among the remaining scales of the SPA-R. It must also be stated that there were no differences with regard to previous experience with sport psychology between the participants in the experimental and control groups. $\chi^2\ (160, 1) = 0.1041$, $p = 0.43$, $\Phi = 0.74$.

Did the educational intervention differentially affect athletic training students' mean scores on stigma tolerance, confidence in sport psychology consulting, personal openness, and cultural preference immediately post-intervention and were changes retained at the six week follow-up?

Four 2 X 3 repeated measures ANOVAs were computed to determine the effect of the educational intervention on athletic training students' mean scores on the four scales of the SPA-R immediately post-intervention as well as at the six week follow-up. Of the four scales on the SPA-R, only confidence in sport psychology consulting showed statistically significant differences immediately post-intervention as well as at the six

week follow-up. Results from Mauchly's test indicated that the assumption of sphericity had been violated for time, χ^2 (2) = 28.76, p < .01. Therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity, € = 0.857 for the main effect for time. A significant interaction was revealed between time and group, *F* (1.17, 316) = 6.86, *p* < .01, *r* = .04. As can be seen in Figure 1, participants in the experimental group initially recorded significantly higher scores on the pretest confidence scale of the SPA-R (*t* (158) = -2.89, *p* < .05, *d* =.22). However, after the administration of the educational intervention, scores on the confidence in sport psychology consulting scale increased for the members of the experimental group from pretest scores (*M* = 4.5, *SD* = 0.84) to post-test scores (*M* = 4.91, *SD* = 0.96) *t* (159) = -5.45, *p* < .01, *d* = .40. No statistically significant change in mean scores was observed for the participants in the experimental group at the six week follow-up, although this score was still significantly higher than their pretest scores on the confidence in sport psychology consulting scale (*t* (159) = -5.73, *p* < .01, *d* = .40). The participants in the control group did not change in scores on the confidence in sport psychology consulting scale between pretest and post-test. No changes were observed on their scores between post-test and at the six week follow-up.

Did the educational intervention impact athletic training students' sport psychology behavior scores at the six week follow-up?

One 2 X 2 repeated measures ANOVA was conducted to determine the effectiveness of the educational intervention with regard to increasing athletic training students' composite scores on sport psychology behaviors at the six week follow-up. Mauchly's test indicated that the assumption of sphericity was not violated for time. There was a significant interaction between time and group, *F* (1, 158) = 496, *p* < .01, *r* =

.75. As can be seen in Figure 2, participants in both the control group (M = 1.89, SD = 2.86) and the experimental group (M = 1.86, SD = 2.56) appeared to have scored similarly on the pretest with regard to their sport psychology behaviors. However, at the six week follow-up, the members of the experimental group reported a significant increase in their reported use of sport psychology behaviors (M = 14.17, SD = 3.71) while participants in the control group (M = 1.81, SD = 2.38) remained at their initially recorded level.

Discussion

Although previous research of athletes' attitudes toward sport psychology consulting (Anderson et al., 2004, Martin, 2005) have proven its usefulness, the literature seems to be lacking any similar assessment of athletic training students' attitudes toward sport psychology. Neither has the effectiveness of an educational intervention been assessed with regard to athletic training students' attitudes toward sport psychology. As a result, the primary aim of the current study was to assess the attitudes of athletic training students and, subsequently, determine the effectiveness of an educational intervention on their attitudes toward sport psychology. A secondary aim was to determine the effectiveness of the educational intervention on athletic training students' sport psychology behaviors.

Results from the current study supported previously reported psychometric properties of the SPA-R. That is, two of the scales, stigma tolerance and confidence in sport psychology consulting, yielded Cronbach alpha coefficients that were consistent with the literature. However, the Cronbach alpha coefficient for the personal openness scale, although considered low by psychometric standards (Cronbach, 1951), was found

to be consistent with previous findings in the literature (Anderson et al. 2004; Lavallee et al. 2005; Martin et al. 2002). On the other hand, while the cultural preference scale also yielded a low coefficient,t this finding was not consistent with previously reported Cronbach alphas in the literature (Anderson et al., 2004, Lavallee et al., 2005; Martin et al., 2002).

Correlation coefficients calculated between the classification variables and the dependent variables revealed moderate relationships between gender and cultural preference, gender and personal openness, and previous experience with sport psychology and confidence in sport psychology consulting. As a result, further analyses were conducted to determine if gender differentiated between participants' pretest mean scores on the scales of the SPA-R. As previously reported, female athletic training students seemed to be more open than male athletic training students to working with sport psychology consultants from other cultural backgrounds. Female athletic training students also indicated they were more willing, when compared to male athletic training students, to utilize sport psychology services. Additional analyses were conducted to determine if previous experience with sport psychology differentiated between pretest mean scores on the scales of the SPA-R. Results showed that athletic training students who had previous experience with sport psychology were more likely, when compared to athletic training students who had no previous experience, to believe that the use of sport psychology could be helpful.

When a series of 2 X 3 repeated measures ANOVAs were computed to determine the differential effect of the educational intervention on athletic training students' attitudes, scores on the confidence in sport psychology consulting scale significantly

increased for the members of the experimental group from pretest to post-test. No changes occurred between post-test and the six week follow-up. On the other hand, participants in the control group experienced no increase in scores on the confidence scale between pretest and post-test. Additionally, a 2 X 2 repeated measures ANOVA conducted to determine the effectiveness of the educational intervention on sport psychology behaviors revealed that members of the experimental group reported a significant increase in their reported use of sport psychology behaviors when compared to those in the control group.

Given the aforementioned results, the author surmised that female athletic training students in the current study appeared to demonstrate a more positive attitude toward sport psychology consulting when compared to their male counterparts. More specifically, female athletic training students seemed to be more open toward using sport psychology in addition to expressing a higher degree of willingness to working with sport psychology consultants from different backgrounds. This finding with regard to gender differentiating between attitudes toward sport psychology appears to be consistent with previous research on student athletes and athletic trainers. That is, previous studies by Anderson et al. (2004) and Martin (2005) for student athletes and Gotsch (2003) for athletic trainers all revealed that gender discriminated between attitudes toward sport psychology.

Women have traditionally been more open toward seeking help (Addis & Mahalik, 2003), disclosing personal concerns, as well as recognizing their need for help (Martin, 2005). Masuda et al. (2005) also confirmed that gender is indeed a significant predictor of seeking help. Courtenay (2000) confirmed the aforementioned by stating that

males are less likely to seek psychological help when compared to women. It has been postulated that the gender role conflict may be responsible for the lack of willingness of males toward seeking help (Pederson & Vogel, 2007). Gender role conflict results from a societal view of male roles that encourages them to fix their own problems and thus deny any help. Addis and Mahalik (2003) also stated that males sometimes view seeking help as an inability to handle their own problems. Consequently, males as a whole are less likely to seek help. Accordingly, the findings of the current study support the aforementioned statements since male athletic training students lack of inclination toward working with a sport psychology consultant was highlighted by their high scores, in comparison to female athletic training students, on the personal openness scale.

With regard to cultural preference, these findings support previous research since Martin (2005) also found that males were more likely to score lower on the cultural preference scale. It has been suggested that males have an increased tendency to identify with and an increased willingness to work with practitioners, when seeking psychological help, from their own cultural background (Martin, 2005). Neighbors and Howard (1987) also found that males are more inclined to seek psychological help from individuals with similar ethnic backgrounds.

Thus, the author believes that sport psychology practitioners should take into consideration these gender differences when presenting sport psychology to athletic training students. That is, since females appear to be more open, sport psychology practitioners may have to utilize a different approach when introducing sport psychology to male athletic training students. One possible method could be to present information about sport psychology to athletic training students in gender-specific groups since the

openness and receptiveness of female athletic trainers could cause an equal but opposite and possibly negative reaction with male athletic training students. Usually in the classroom environment when one segment of the class is really interested in the material being presented and the other is not, how the presenter deals with this issue can cause those not interested to be further disengaged from the material.

Furthermore, it may be that male athletic training students need to be shown in concrete terms (i.e., using examples and specific scenarios how sport psychology can be helpful within athletic training and by extension injury rehabilitation. It is also worth incorporating a segment on help-seeking behavior to educate male athletic training students that utilizing sport psychology in no way reflects on them negatively; it is simply an additional technique that can be utilized to help the injured athletes under their care. Moreover, it should be emphasized that the utilization and incorporation of sport psychology into injury rehabilitation exposes injured athletes to another avenue that could potentially help them progress through their rehabilitation more efficiently, ensuring a speedy return to the field of play. Anderson et al. (2004) supported the aforementioned by emphasizing that sport psychology practitioners may well have to spend additional time with males emphasizing the benefits that can be derived from the utilization of sport psychology. Shaffer, Vogel, and Wei (2006) also suggested that practitioners should accentuate the positive benefits that can be derived from the utilization of sport psychology within the athletic training domain, thus reducing any possible risks.

Results from the current study also revealed athletic training students who had previous experience with sport psychology expressed more confidence in seeking sport

psychology consultations when compared to those with no previous experience. These results are also consistent with previous literature since both Anderson et al. (2004) and Martin (2005) yielded similar results. These findings seem logical since it appears that athletic training students with previous sport psychology experience would inevitably have increased levels of confidence with regard to understanding the important role sport psychology plays in the rehabilitation process. Furthermore, it is quite possible that the stigma and stereotype normally associated with the use of sport psychology services could have been dispelled via these individuals' prior exposure to sport psychology. The elimination of any stigma or stereotype has the potential to increase these individuals' perceived value of sport psychology. Correspondingly, if athletic training students have a higher perceived value of sport psychology and its application to athletic training there is an increased chance they may be more confident about the usefulness of sport psychology services. Thus, they may be more willing to utilize and incorporate sport psychology into athletic training as well as injury rehabilitation.

More importantly, this finding highlights the need for increased exposure of athletic training students to sport psychology given the potential benefit of increased confidence levels with regard to sport psychology. This assertion is supported by previous research studies by both Gordon (2002) and Gotsch (2003) that have called for athletic training students and athletic trainers to have increased exposure to sport psychology. It is the author's opinion that regardless of the method of exposure, there is a distinct possibility that many athletic training students would benefit. With that being said, exposure to sport psychology could result from formal sport psychology classes,

workshops, guest lectures, conference attendance, or by informally spending time shadowing a sport psychologist.

Hypothesis three of the current research study was partially supported since it was found that scores on the confidence in sport psychology consulting scale increased post-intervention while scores on the personal openness and cultural preference scales remained unchanged. Furthermore, post-test increases in confidence in sport psychology consulting were retained at the six week follow-up assessment. No changes were also recorded in scores on the stigma tolerance scale. First, it must be stated that increased scores on the confidence in sport psychology consulting scale appear to be consistent with previous literature. Seminal work by Zakrajsek (2007) found that the confidence in sport psychology consulting scale was one of the two scales on a modified version of the SPA-R to show any significant changes post-intervention. Anderson et al. (2004) also found that the confidence in sport psychology consulting scale was the only significant predictor of intentions. Thus, from the literature it is apparent that the confidence in sport psychology consulting scale seemed to be the scale most amendable to change.

This increase in scores on the confidence in sport psychology consulting scale could first be attributed to the fact that approximately half of the sample, 49.4%, had previous experience with sport psychology. Thus, as previously mentioned, their prior exposure could have dispelled some of the stereotypes and stigma normally associated with sport psychology. Furthermore, their previous experience could have increased the perceived value of sport psychology. Consequently, after the administration of an educational intervention geared toward addressing confidence in sport psychology consulting it should not be surprising that increased scores were yielded.

In addition, the educational intervention featured a series of case studies with practical examples of rehabilitation scenarios. During the course of the educational intervention members of the experimental group were asked how basic sport psychology techniques could be utilized in dealing with the case scenarios. This participatory and deductive approach could have helped improve the perceived value and applicability of sport psychology within the rehabilitation context. Furthermore, the ease with which these basic techniques could potentially be incorporated into injury rehabilitation could have really resounded with the participants, resulting in increased confidence in sport psychology consulting scores.

With regard to the lack of changes on the stigma tolerance scale and personal openness the author believes that one educational intervention about the application of sport psychology to athletic training may not have been sufficient to cause any noticeable changes on these scales. Societal stigma and stereotypes associated with psychology have been socialized for generations. Thus, it may have been difficult for one educational intervention to affect any noticeable change in individuals. In order for this to take place a societal shift with regard to the perception of psychology may have to take place as well as continued levels of education in order to debunk those assumptions.

Furthermore, Osgood and Tannenbaum's (1955) theory of congruity states that attitudinal change is also dependent on the relevance and credibility of the source delivering the information. Participants in the current study only had only limited interaction with the researcher. They were then exposed to the researcher for 50-60 minutes only to see the researcher again six weeks later. Thus, it could have been perceived that the researcher was simply performing this exercise as part of a research

project with no genuine concern about whether the participants really benefited. Additionally, the fact that the presenter was a doctoral student could have impacted the degree to which the information presented was received. Students may have placed more meaningfulness on the educational intervention if it was presented by a professional sport psychologist they were familiar with.

Lastly, participants' scores on the cultural preference scale did not experience any change as a result of the educational intervention. It is important to note that the Cronbach coefficient for this scale was very low. Thus, it could be assumed that this scale was not very good at measuring consistency across items, i.e., the degree to which athletic training students were open to working with a sport psychology practitioner from a different cultural background. Furthermore, in the author's own assessment, the homogeneity of the sample could have contributed to lack of changes on the scale. Very similar to stigma tolerance and personal openness, one discussion with regard to stereotypes about working with practitioners from other backgrounds may not have been sufficient to cause any immediate noticeable changes in a behavior that has been ingrained in an individual.

The fourth hypothesis appeared to be the only hypothesis that was fully supported by the data analyses. Results revealed that members of the experimental group reported an increase in their use of sport psychology behaviors at the six weeks follow-up. The author believes that this increase could have been attributed to a number of factors. First, results from the current study revealed that the confidence in sport psychology consulting scale was the only scale that showed increases as a result of the educational intervention. Thus, the sample indicated increased confidence in sport psychology consulting and,

according to Anderson et al. (2004), confidence in sport psychology consulting is the only significant predictor of intentions. Consequently, using the theory of reasoned action, it would make sense that the sample would report an increase in their utilization of sport psychology behaviors since confidence in sport psychology consulting will no doubt influence their intentions that will in turn influence their utilization of sport psychology behaviors.

Second, the educational intervention exposed the sample to basic sport psychology techniques that could be incorporated into rehabilitation programs. The sample was introduced to sport psychology techniques such as goal setting and deep breathing. The author believes that these techniques can be easily incorporated into a rehabilitation program. Furthermore, case studies were utilized to allow the participants an opportunity to determine how these basic techniques could be interwoven into their rehabilitation programs. Lastly, it is possible that the highlighting of research findings with regard to the use of sport psychology within injury rehabilitation, the fact that other institutions are incorporating sport psychology into athletic training and, most importantly, its effectiveness within the rehabilitation context could have accounted for the increase with regard to sport psychology behavior.

Additional analyses were conducted to determine if a relationship existed between participants' behavior scores and their confidence in sport psychology consulting scores. Results revealed that significant relationships existed between behavior scores at the six weeks follow-up and the six weeks follow-up confidence scores ($r = .39$, $p < .01$). Thus, it could be assumed that the resulting increases in sport psychology behaviors could have

been attributed, in part, to the increases found on the confidence in sport psychology consulting scale of the SPA-R.

The aforementioned increase in the use of sport psychology behaviors at the six-week follow-up by participants in the experimental group highlights the need for increased exposure of athletic training students to sport psychology. This assertion is supported by previous research studies by both Gordon (2002) and Gotsch (2003) that have called for athletic training students and athletic trainers to be increasingly exposed to sport psychology. Finally, given the potential benefits that could be gained from the incorporation of sport psychology into injury rehabilitation, athletic training students, in the current sample, appear to be quite willing to make use of sport psychology to possibly augment their present skill set in order to help injured athletes return to the field as soon as possible.

Although only one composite score for sport psychology behaviors was reported, increases were recorded in four out of the five behaviors assessed. First, participants reported an increase in the number of times they sought out additional information about sport psychology. The author believes that this occurrence, at the very least, underlies the rudimentary interest which some of the participants may have with regard to the use of sport psychology within the context of rehabilitation. Furthermore, this behavior could have also been due to participants possibly identifying with the need to incorporate sport psychology within rehabilitation program. Consequently, it could be assumed that prior to making a decision about the merits of utilizing sport psychology participants probably wanted to validate the information presented to them. Most importantly, the increases

noted in this particular behavior possibly indicates that participants felt strongly enough about the utility of sport psychology to seek out more information about the topic.

Participants also reported an increased tendency to speak to athletes about sport psychology. The author attributes this increase firstly, to participants probably believing that sport psychology could be helpful to these athletes during the course of their injury rehabilitation. Secondly, they wanted to communicate this information to the athletes under their care thus resulting in increased communication about sport psychology. The author also believes that increases in this sport psychology behavior could have been due to the nature of the educational intervention. More specifically, the educational intervention focused primarily on using sport psychology techniques to deal with common rehabilitation issues such as decreased motivation and confidence and increased anxiety with regard to rehabilitation. These issues often cause injured athletes to become listless and apathetic toward their rehabilitation. Thus, it could be reasoned that given the sample's perceptions about possible utility of sport psychology techniques they decided to utilize some of the techniques introduced. Hence, this necessitated them speaking to the athletes about sport psychology.

Of all the sport psychology behaviors assessed in the current study, the behavior that increased the most was "have you applied any sport psychology techniques in rehabilitation with an injured athlete?" At a casual glance it could be possibly construed that these athletic training students may have been utilizing skills which they have not been sufficiently educated about or trained to use. However, the author was hopeful techniques such as the use of goal setting, making use of rehabilitation partners, having the athletes charts their rehabilitation progress and basic deep breathing were utilized.

These techniques were chosen because of the ease with which they could be incorporated very effectively within injury rehabilitation. Moreover, the increases recorded, with regard to this behavior, possibly reflects the overall acceptance by the athletic training students of the utility of incorporating sport psychology into injury rehabilitation. Last, this occurrence augers well for increased utilization of sport psychology since participants in the sample appeared to be very willing to make use of the new skills they were introduced to.

Of the remaining two sport psychology behaviors assessed in the current study only one "have you talked to a sport psychology consultant about an athlete?" recorded an increase. The increase, although small, could have been due to the fact that only 35% of the sample had access to sport psychology services. Despite this small increase the author believes that athletic training students' willingness to consult with a sport psychology consultant probably reflects, to some degree, their acceptance of sport psychology as a technique which could be beneficial to athletes within the rehabilitation context. Furthermore, this increase is even more encouraging when one considers the stigma traditionally associated with the word "psychology" in today's society.

Last, no increases were noted on the final sport psychology behavior "have you referred an injured athlete to a sport psychology consultant?" As previously mentioned only 35% of the sample had access to a sport psychology consultant; thus, this limited access could have accounted for the low scores obtain on the behavior. However, it could have also been that the educational intervention did not specifically deal with how referrals could be made or on what basis they should be made. Thus, expecting an increase on this behavior may have been partially unrealistic. In conclusion, it must be

stated that participants' increased scores on the sport psychology behaviors appear to be very positive with regard to the utilization of sport psychology within the context of injury rehabilitation.

There were some limitations to the investigation that may influence the interpretation of the results. First, the instrument used to assess the sample's attitudes toward sport psychology was specifically designed to assess athletes' attitudes toward sport psychology. In the current study athletic training students were asked to take the perspective of athletes on the team with whom they worked. Although this approach was endorsed by the lead author of the SPA-R, when completing the SPA-R this method of assessment primarily assumed that athletic training students were able to do this. It also assumed that the data collected were the actual attitudes of the athletic training students. Furthermore, the degree to which the results of this study could be extended to other athletic training students is limited due to employing a sample of convenience. Another possible limitation of the study was the absence of any assessment procedures to determine participants' perceptions of the relevance of the information presented or the effectiveness of the researcher in presenting the information. Such an assessment would have been consistent with Osgood and Tannenbaum's (1955) theory of congruity. Lastly, the internal validity of the study could have also been jeopardized due to the utilization of the non equivalent control group method which dictated the random assignment of groups to either the control or experimental as opposed to individuals.

With the aforementioned limitations being stated, the author suggests that future areas of research need to focus on first modifying the SPA-R in order to be able to properly assess the attitudes that both athletic trainers and athletic training students hold

toward sport psychology. Among some of the changes worth making to the SPA-R, in order to make it more specific to athletic training students and athletic trainers, are revising items to include eliminating phrases such as “my coach would think” and “I would not want my coach to know” among others. After the aforementioned modification a reassessment of the psychometric properties of the SPA-R under these conditions would then be required. The information derived from these studies could then be used by sport psychology practitioners to tailor their approach to presenting sport psychology in the most appropriate and effective manner to athletic trainers and athletic training students. Additionally, a more thorough intervention such as a college semester course could be used to determine its effectiveness on attitudes toward sport psychology of athletic training students.

In conclusion, female athletic training students appear to be more open than males with regard to the use of sport psychology. Furthermore, athletic training students with previous exposure to sport psychology also seem to be willing to utilize sport psychology. However, the current study provided partial support for the effectiveness of an educational intervention aimed toward improving attitudes toward sport psychology and increasing the use of sport psychology behaviors among athletic training students. Additional research, though, is needed to determine how attitudes influence the utilization of sport psychology skills within the context of athletic training, more specifically, injury rehabilitation.

References

Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the context of help seeking. *American Psychologist, 58*, 5-14.

Anderson, A. G., Hodge, K. P., Lavallee, D., & Martin, S. B. (2004). New zealand athletes' attitudes towards seeking sport psychology consultation. *New Zealand Journal of Psychology*, *33*, 129-136.

Ajzen, I. (1985). From intentions to action: A theory of focus on these important subgroups. In J. Kuhl and J. Beckman (Eds.), *Action-control: From cognition to behavior* (pp. 11-39). Heidelberg: Springer.

Ballek, R. E. (2002). *Sport psychology in the training room: Athletic trainers' perspectives*. Unpublished Masters Thesis, San Diego State University.

Cash, T. F., Begley, P. J., McCown, D. A., & Wiese, B. C. (1975). When counselors are heard but not seen: Initial impact of physical attractiveness. *Journal of Counseling Psychology, 22*, 273-279.

Courtenay, W. H. (2000). Behavioral factors associated with disease, injury, and death among men: Evidence and implications for prevention. *The Journal of Men's Studies, 9*, 81-142.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.

Cupal, D. & Brewer, B. (2001). Effect of relaxation and guided imagery, reinjury anxiety and pain following anterior cruciate ligament reconstruction. *Rehabilitation Psychology, 46,* 28-43.

Doyle, M. (2002). A new dimension for the athletic training room: The spirit of the room. *Athletic Therapy Today*, *7*, 34-35.

Fine, T. (1992). The impact of issue framing on public opinion: Towards affirmative action programs. *Social Science Journal, 29*, 323-334.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass: Addison-Wesley.

Ford, I., & Gordon, S. (1997). Perspectives of sport physiotherapists on the frequency and significance of psychological factors in professional practice: Implications for curriculum design in professional training. *The Australian Journal of Science and Medicine in Sport, 29*, 34-40.

Golin, A. K. (1970). Stimulus variables in the measurement of attitudes towards disabilities. *Rehabilitation Counseling Bulletin*, *14*, 20-26

Gordon, S. (2002). Psychological aspects of recovery from sport injury. *The New Zealand journal of sports medicine, 30*, 98-101.

Gotsch, K. (2003). *Attitudes of certified athletic trainers concerning formal sport psychology education*. Unpublished masters thesis. Ball State University.

Halloran, J. D. (1967). *Attitude formation and change*. Leicester: Leicester University Presss.

Harmison, R. J. (2000). *Athletes attitudes towards seeking sport psychology consultation: Development and validation of the sport psychology attitudes questionnaire.* Unpublished dissertation, University of North Texas.

Ievleva, L. & Orlick, T. (1991). Mental links to enhance healing. *The Sport Psychologist, 5*, 25-40.

Kerrick, J. S. (1958). The effect of relevant and non-relevant sources on attitude change. *Journal of Social Psychology, 47*, 15-20.

Kindeberg, T., & Christensson, B. (1994). Changing Swedish students' attitudes in relation to the AIDS epidemic. *Health Education Research*, *9*, 171-181.

Krahe, B., & Altwasser, C. (2006). Changing negative attitudes towards persons with disabilities: An experimental intervention. *Journal of Community & Applied Social Psychology*, *16*, 59-69.

Larson, G. A., Starkey, C., Zaichkowsky, L. D. (1996). Psychological aspects of athletic injuries as perceived by athletic trainers. *The Sport Psychologist*, *10*, 37-47.

Lavallee, D., Jennings, D., Anderson, A., & Martin, S. B. (2005). Irish athletes' attitudes towards seeking sport psychology consultation. *The Irish Journal of Psychology, 26*, 115-121.

Martin, S. B. (2005). High school and college athletes' attitudes toward sport psychology consulting. *Journal of Applied Sport Psychology, 17*, 127-139.

Martin, S. B., Kellmann, M., Lavallee, D., & Page, S. J. (2002). Development and psychometric evaluation of the sport psychology attitudes- Revised form: A multiple group investigation. *The Sport Psychologist*, *16*, 272-290.

Martin, S. B., Wrisberg, C. A., Beitel, P. A., & Lounsbury, J. (1997). NCAA division I athletes' attitudes toward seeking sport psychology consultation: The development of an objective instrument. *The Sport Psychologist*, *11*, 201-218.

Masuda, A., Suzumura, K., Beauchamp, K., Howells, G., & Clay, C. (2005). United states and Japanese college students' attitudes toward seeking professional psychological help. *International Journal of Psychology, 40*, 303-313.

National Athletic Trainers' Association. (1994). *Role delineation study*. Dallas: Texas: Author.

Osgood, C. E., & Tannenbaum, P. H. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review, 62*, 42-55.

Neighbors, H. W., & Howard, C. S. (1987). Sex differences in professional help seeking among adult Black Americans. *American Journal of Community Psychology, 15*, 403-417.

Noe, R. (2002). *Employee training and development*. New York: Mc Grawhill

Pederson, E., & Vogel, D. (2007). Male gender role conflict and willingness to seek counseling: Testing a mediation model on college-aged men. *Journal of Counseling Psychology, 54*, 373-384.

Pero, S. F. (1995). *Development, implementation and evaluation of an educational program in sport psychology for athletic trainers*. Unpublished doctoral dissertation, Temple University.

Pettijohn, T. F. (1989). *Psychology: Concise introduction*. Guilford, CT: Duskin.

Ravizza, K. (1988). Gaining entry with athletic personnel for season long consultation. *The Sport Psychologist*, *2*, 243-254.

Roeher, G. A. (1961). Significance of public attitudes in rehabilitation of people with disabilities. *Rehabilitation Literature*, *22*, 66-72.

Rokeach, M., & Rothman, G. (1965). The principle of belief congruence and the congruity principle as models of cognitive interaction. *Psychological Review, 72*, 128-142.

Schaffer, P., Vogel, & Wei, M. (2006). The mediating roles of anticipated risks, anticipated benefits, and attitudes on the decision to seek professional help: An attachment perspective. *Journal of Counseling Psychology, 53*, 442-452.

Schell, B., Hunt, J., & Lloyd, C. (1984). An investigation of future market opportunities for sport psychologists. *Journal of Sport Psychology*, *6*, 335-350.

Scherzer, C. (2004). *Training athletic trainers in the delivery of sport psychology rehabilitation interventions*. Unpublished doctoral dissertation, University of Arizona.

Scherzer, C., Brewer, B., Cornelius, A., Van Raalte, J., Petitpas, A., Sklar, J., et al., (2001). Psychological skills and adherence to rehabilitation after reconstruction of the anterior cruciate ligament. *Journal of Sport Rehabilitation, 10,* 165- 172.

Silva, III, J. M. (1984). The status of sport psychology: A national survey of coaches. *Journal of Physical Education, Recreation and Dance*, *55*, 46-49.

Sullivan, J., & Hodge, K. P. (1991). A survey of coaches and athletes about sport psychology in New Zealand. *The Sport Psychologist*, *5*, 140-151.

Tannenbaum, P. H. (1967). The congruity principal revisited: Studies in the reduction, induction, and generalization of persuasion. In L. Berkowitz (Ed.), A*dvances in experimental social psychology* (pp. 270-320). New York: Academic Press.

Theodorakis, Y. (1994). Planned behavior, attitude strength, role identity and the prediction of exercise behavior. *The sport Psychologist, 8*, 149-165.

Tierney, III, J. E. (1988). *Diffusion of sport psychology ideas and techniques into the elite U.S. swimming community*. Unpublished master's thesis, Southern Illinois University.

Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, *53*, 325-337.

Wiese, D. M., & Weiss, M. R. (1987). Psychological rehabilitation and physical injury: Implications for the sportsmedicine team. *The Sport Psychologist*, *1*, 318-330.

Wristberg, C. A., & Martin, S. B. (1994). *Attitudes of African-Americans and Caucasian athletes towards sport psychology*. Paper presented at the meeting of the Association for the Advancement of Applied Sport Psychology, Incline Village, NV.

Zakrajsek, R. (2007). *Impact of a tailored intervention on coaches' attitudes and use of sport psychology services*. Unpublished dissertation, West Virginia University.

Zakrajsek, R., & Zizzi, S. (2008). How do coaches' attitudes change when exposed to a sport psychology workshop? *Journal of Coaching Behavior, 1,*1, 1-18.

Table 1

Demographic Characteristics of Athletic Training Students (N=160)

	%	*N*
Gender		
Male	44.4	71
Female	55.6	89
Academic Year		
Junior	49.4	79
Senior	50.6	81
Sport primarily played		
Basketball	21.3	34
Football	12.5	20
Softball	11.9	19
Track and Field	10.6	17
Soccer	11.3	18
No Sport	12.5	20
Clinical Experiences		
Baseball	38.8	62
Basketball	36.3	58
Football	18.8	30
Worked with a SPC		
Yes	6.9	11
No	93.1	149
Taken a Psychology Course		
Yes	98.1	157
No	1.9	3
Taken Sport Psychology Course		
Yes	53.1	85
No	46.9	75
Taken a Psychology of Injury Course		
Yes	69.4	111
No	30.6	49
Experience with Sport Psychology		
Yes	49.4	79
No	50.6	81
Have access to a SPC		
Yes	35	56
No	65	104

Table 2

Means and Standard Deviation for Each SPA-R Scale by Groups for Pre-Test, Post Test and Follow-Up

All Respondents (*N*=160)

	Pretest				Post-Test				Follow Up			
	Control (*N* = 77)		Experimental (*N* = 83)		Control (*N* = 77)		Experimental (*N* = 83)		Control (*N* = 77)		Experimental (*N* = 83)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Confidence	4.33	0.88	4.71	0.75	4.49	0.99	5.44	0.74	4.49	0.97	5.30	0.77
Cultural Preference	3.73	0.99	3.71	1.08	3.43	1.25	3.42	0.97	3.48	1.01	3.64	1.27
Stigma Tolerance	3.66	1.05	3.67	1.02	3.46	1.04	3.51	0.85	3.69	1.23	3.65	0.91
Personal Openness	4.62	0.91	4.77	0.93	4.58	1.16	4.35	0.96	4.67	1.37	4.61	0.85

Table 3

% of "Yes" and Means and Standard Deviation for Sport Psychology Behaviors by Groups for Pre-Test and Follow-Up

All Respondents (*N*=160)

	Pretest						Follow Up					
	Control (*N* = 77)			Experimental (*N* = 83)			Control (*N* = 77)			Experimental (*N* = 83)		
	% (Yes)	M	SD	% (Yes)	M	SD	% (Yes)	M	SD	% (Yes)	M	SD
Beh 1	2.6	0.11	0.76	6	0.15	0.65	5.2	0.14	0.62	96.4*	3.48*	1.55
Beh 2	18.2	0.55	1.40	20.5	0.50	1.07	22.1	0.58	1.30	95.2*	4.19*	1.76
Beh 3	2.6	0.07	0.48	6	0.14	0.64	0	0.00	0.00	20.5*	0.68*	1.42
Beh 4	1.3	0.13	0.11	0	0.0	0.00	0	0.00	0.00	4.8	0.09	0.48
Beh 5	29	1.12	2.02	38.6	1.06	1.65	29	1.07	1.84	98.8*	5.71*	0.89

Figure 1. Scores on the Confidence in Sport Psychology Scale vs. Time (N =160)

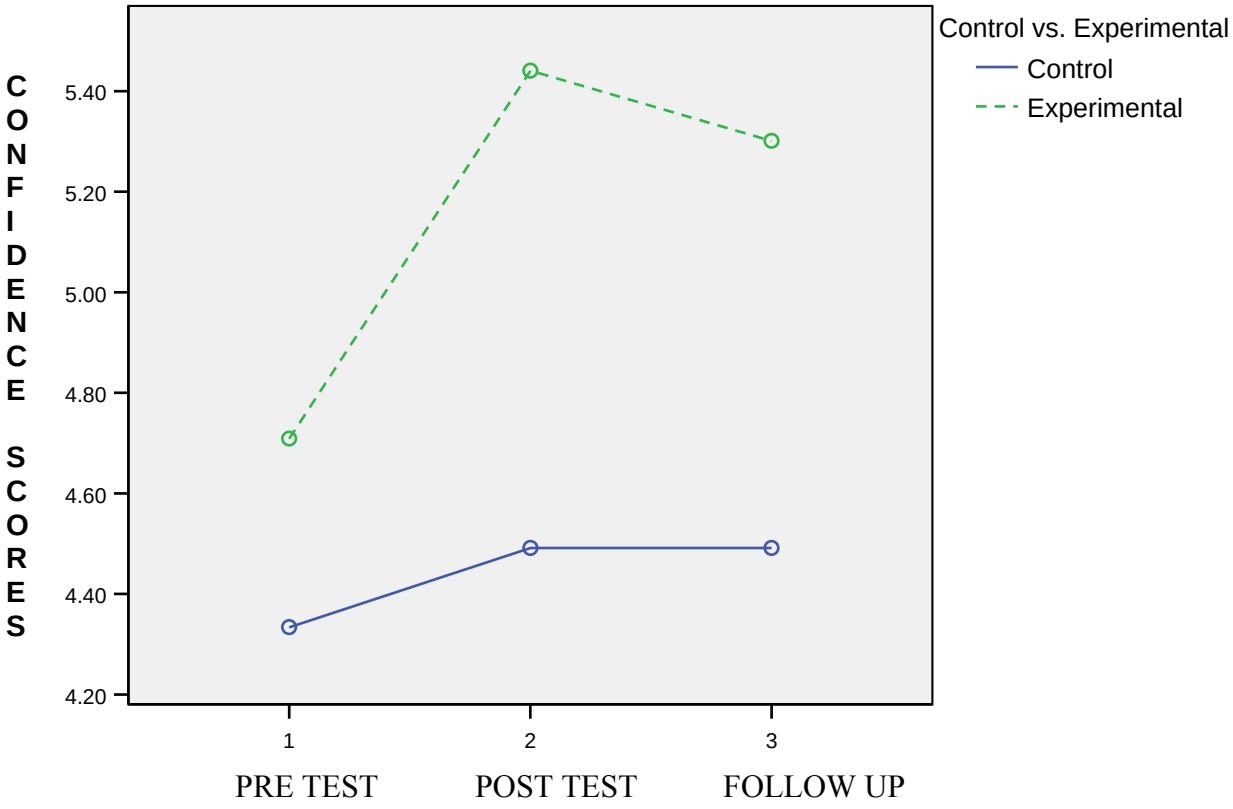
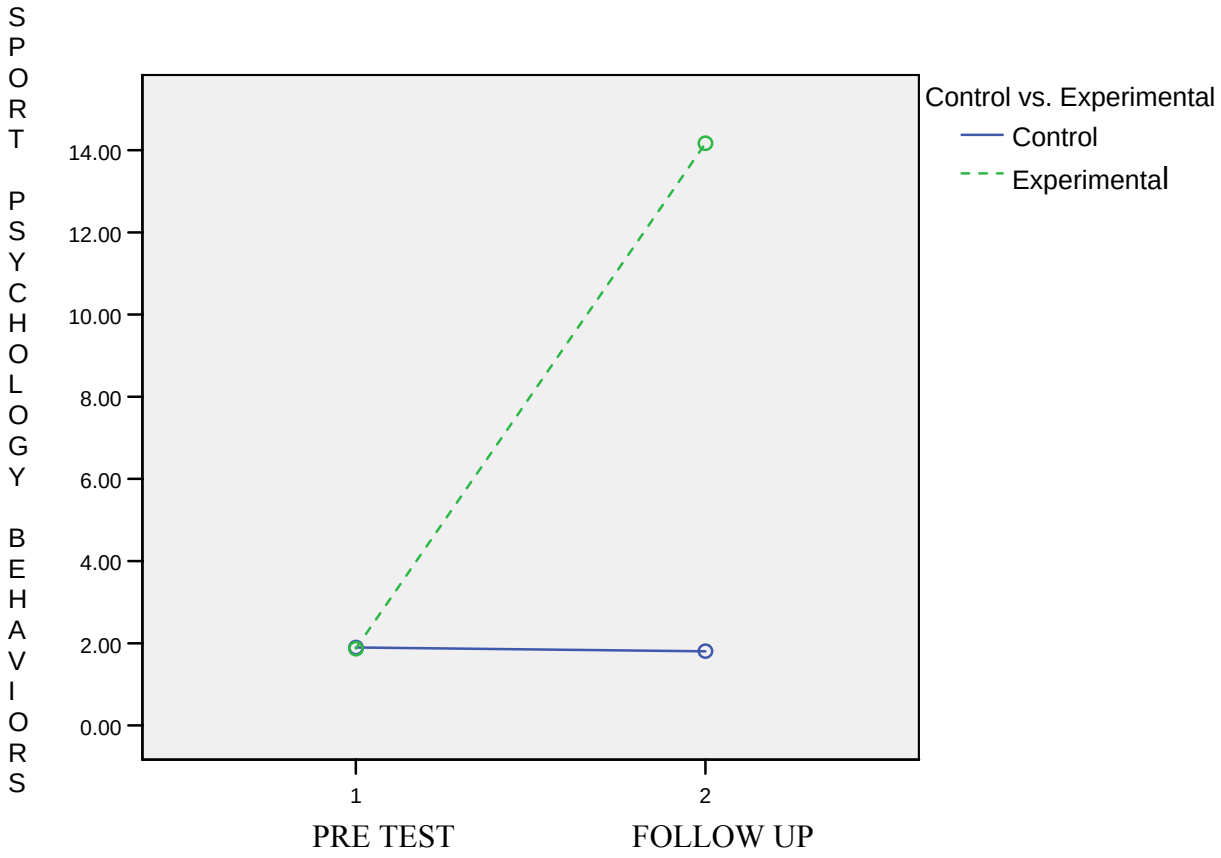


Figure 2. Sport Psychology Behaviors Scores vs. Time (N =160)



Appendix A

Review of Literature

REVIEW OF LITERATURE

Introduction

This chapter will provide the literature foundation for assessing athletic training students' attitudes with regard to sport psychology. However, since a void currently exists in the literature in this area, a systematic approach utilizing the research that has been conducted with athletes' and athletic trainers' attitudes will be introduced. Additionally, the importance of this assessment will be emphasized given the many potential benefits that could be derived from the application of sport psychology to rehabilitation. The role that athletic trainers, and by extension athletic training students, hold in relation to injured athletes will also be discussed. Furthermore, the lack of sport psychology education within athletic training education programs will also be highlighted since education is believed to influence attitudes. Attitudinal change will also be explored using Osgood and Tannenbaum (1955) congruity theory which has been postulated to cause attitudinal change via the use of persuasive communication. Focus will also be placed on the lack of assessment of athletic training students' attitudes toward sport psychology and the negative stigma often associated with the term "psychology", while the effectiveness of educational interventions with regard to attitudes will also be discussed. Lastly, the, theory of reasoned action (TRA; Ajzen, 1985; Fishbein & Ajzen, 1975) which will be driving the introduction of an educational intervention to modify attitudes will be introduced.

Theory of Reasoned Action

The TRA suggests that an individual's intention to perform a behavior is the sole predictor of that behavior (Ajzen, 1985; Fishbein & Ajzen, 1975). This intention results

from two basic determinants, attitude and subjective norms. More specifically, an individual's attitude toward a specific behavior is contingent on the behavior's perceived consequences and value to the person. On the other hand, subjective norms can be described as a measure of the influence of the social environment on behavior. That is, the more acceptable a behavior is viewed by one's peers the more likely an individual will be inclined to participate in said behavior. Accordingly, intentions can be expressed as a linear combination of an individual's attitudes and the subjective norms associated with that behavior.

Using an example to clarify the application of the TRA to the current study, the author postulates that athletic training students' attitude toward sport psychology will be dependent on their perceived value of sport psychology. That is, if they (athletic training students) believe that the utilization/incorporation of sport psychology into athletic training more specifically, injury rehabilitation can augment the rehabilitation experience as well as decrease the time spent by injured athletes in rehabilitation there should be a high perceived value associated with sport psychology. However, attitude towards sport psychology are also being influenced by the societal norms associated with the term psychology. That is, it is quite possible that some athletic training students' attitudes toward sport psychology may be influenced by the negative connotations society has imposed on the term psychology. Furthermore, the notion that sport psychology is only for problem athletes could also negatively influence athletic training students' attitudes toward sport psychology and their consequent behaviors with regard to its incorporation into rehabilitation programs.

Thus, the combination of the aforementioned attitudes and subjective norms has the potential to influence athletic training students' intentions to utilize/incorporate sport psychology into athletic training. Hypothetically speaking, athletic training students could have very little intentions to utilize/incorporate sport psychology into athletic training if (a) athletic training students know very little about sport psychology and thus perceive it to have little value and (b) society's negative connotations of psychology influences their attitudes toward sport psychology. Consequently, the primary purpose of this study is to attempt to modify attitudes towards sport psychology via the administration of an educational intervention. Furthermore, it is also hoped that this educational intervention will debunk the subjective norms associated with the term "sport psychology." Ultimately, the author envisions athletic training students reflecting modified attitudes towards sport psychology which will hopeful lead to an increase in the utilization/incorporation of sport psychology into athletic training, more specifically injury rehabilitation.

Although the use of the TRA has been supported in the literature with regards to exercise behavior change (Blue, 1995; Godin, 1993; Godin & Shephard, 1990; Hagger, Chatzisarantis, & Biddle, 2002; Hausenblas, Carron, & Mack, 1997), its application to sport psychology has been limited. Only one study by Anderson et al. (2004) has applied the theoretical concept of the TRA along with its extension the Theory of Planned Behavior (TPB; Ajzen & Madden, 1986). Anderson et al. (2004) employing a sample of 112 athletes, used the SPA-R as a measure of athletes' attitudes while a self-constructed questionnaire was utilized to assess intentions, subjective norms and perceived behavioral control. The internal consistency coefficients for each of the aforementioned scales were

0.94, 0.73, and 0.81, respectively. Results revealed that the variables associated with TRA, attitude, and subjective norms accounted for 38% of the intention to use sport psychology with the subscale of confidence in sport psychology consulting and subjective norms being significant predictors. Conversely, the variables of the TPB, confidence in sport psychology consulting, subjective norms, and perceived behavioral control, accounted for 40% of the variance in intention to exercise.

According to Anderson et al. (2004) these results appeared to be consistent with previous research since Godin (1993) indicated that the variables associated with the TRA, attitude and subjective norms could account for about 30% of the variance in intention with regard to exercise, while the addition of perceived behavioral control, a variable associated with the TPB, could lead to an increase of between 4-20% in variance predictor.

Consequently, the authors concluded that assessing athletes' attitudes towards sport psychology could be very helpful in determining and influencing their intention to use sport psychology. Furthermore, the subscale confidence in sport psychology consulting appeared to be only subscale of the SPA-R that significantly influenced intentions to use sport psychology. Thus, interventions that target this scale may be particularly helpful in increasing intention to use sport psychology.

However, the driving component behind the TRA is the attitude expressed by an individual toward a certain behavior. Attitude in this particular study primarily refers to athletic training students' attitudes toward sport psychology. As a result, the next major section of this literature review will focus on attitudes toward sport psychology. It must be stated, though, that the majority of the work done with regard to attitudes has been

conducted with athletes. Consequently, this review will begin with athletes' attitudes, then progress to athletic trainers' attitudes, and finally focus on the least researched area athletic training students' attitudes toward sport psychology.

Athletes' Attitudes Towards Sport Psychology

The assessment of athletes' attitudes toward sport psychology is a concept that has evolved over the course of time. Seminal assessments of athletes' attitudes toward sport psychology involved simple methods such as a researcher delivering a sport psychology program followed by an assessment of the effectiveness of the program, or the administration of a researcher-constructed survey to determine the attitudes of athletes toward sport psychology.

Hellstedt (1987) pioneered the concept of introducing a sport psychology program to participants, skiers in grades 8-12, during the course of their pre-competition season using a workshop format. At the end of program participants were asked to evaluate their progress as well as the program using an instrument constructed for that purpose by the researcher. Results revealed that the participants perceived the program to be helpful in addition to indicating that the topics introduced were rated moderate to high. Smith and Johnson (1990) also presented a similar program to minor league players within the Houston Astros' organization during both spring training and the season focusing on psychological skills training. Upon the completion of the second year of the program athletes were asked to complete a questionnaire evaluating the effectiveness of the program. Results indicated that 93% of the participants stated psychological factors were important, while there was a rise from 63% to 92% with regard to perceived helpfulness of the program between its first and second years. Only 4% of the participants did not

perceive that the program benefited them at all. Thus, Smith and Johnson (1990) stated that the participants perceived psychological factors to be important and attitudes toward psychological factors progressively became more positive upon being exposed to the psychological skills training program.

The other initial method of assessing athletes' attitudes toward sport psychology was via the construction of surveys that were not psychometrically evaluated. Heishman and Bunker (1989) developed such a survey that they administered to female lacrosse players (*N*=55) competing in the Lacrosse World Cup. This survey was comprised of questions asking participants about the importance of mental preparation and their personal use of mental preparation. Upon analysis of the results, 81% of the participants indicated they viewed mental preparation as "very" or "extremely important" in competition preparation; however, only 44% indicated that they used mental preparation before competition. Furthermore, 17% specified they had never used mental preparation before competition. As a result, it was concluded that despite participants rating mental preparation, and by extension sport psychology, "important", they did not seem to indulge in practicing mental preparation on a regular basis.

Sullivan and Hodge (1991) also used a self-constructed survey to assess New Zealand athletes (*N*= 68) about their perceptions of sport psychology, the importance of psychological skills and their use of sport psychology. Participants indicated that the importance of sport psychology to elite level sporting success was very high, with 73.8% expressing an interest in working with a sport psychologist, while 66% felt their performances would increase if they worked with a sport psychologist. Thus, it seemed

that athletes were very open and positive about the role of sport psychology in their success.

However, the previously mentioned rudimentary methods of assessing athletes' attitudes toward sport psychology began to come of age via the work of Martin, Wrisberg, Beitel and Lounsbury (1997) with the development of the Attitude Toward Seeking Sport Psychology Consultation Questionnaire (ATSSPCQ). This initial 50-item instrument was developed based on the Attitudes Towards Seeking Professional Psychological Help (ATSPPH; Fischer & Farina, 1995; Fischer & Turner, 1970) to assess NCAA Division I athletes' perceptions of sport psychology consultants. Martin et al. (1997) conducted a principal component analysis that indicated that the 50 items loaded on three factors: stigma tolerance, recognition of need/confidence and personal openness. Cronbach coefficient alpha for the aforementioned scales were 0.89, 0.81 and 0.64 respectively. Test-retest correlations were found to be 0.93 stigma tolerance, 0.88 for recognition of need/confidence and 0.85 for personal openness.

Martin et al. (2002) in an attempt to modify the ATSSPCQ conducted an exploratory factor analysis approach using a sample of 647 high school and college athletes ranging in age from 14 to 26. Results from the alpha factor analysis revealed a four-factor solution accounting for 46% of the variance. These four factors were stigma tolerance, confidence in sport psychology consulting, personal openness and cultural preference. Consequently, 25 items were deleted from the ATSSPCQ due to either low inter-item correlations, or due to a loading of less than .50, or a loading on other factors. Of those 25 items which remained 6 were assigned to a different scale and four represented a new factor, cultural preference. In addition, validity of the resulting

instrument was determined using a confirmatory factor analysis with a sample of 1,077 athletes from the United States, England and Germany. Comparisons between the four factor model obtained from the exploratory factor analysis and a three factor model and a tow factor model using the goodness-of-fit indices revealed that the for factor model was found to be the best fit. Thus, the resulting questionnaire, the SPA-R, was formed consisting of 25 items distributed among four scales: (1) Stigma Tolerance (7 items), (2) Confidence in Sport Psychology Consulting (8 items), (3) Personal Openness (6 items) and (4) Cultural Preference (4 items).

With regard to the SPA-R the stigma tolerance scale measures athletes' belief that others will label them as having psychological problems if they use a sport psychologist. The confidence in sport psychology consulting scale assesses athletes' beliefs about the usefulness of sport psychology and mental training. The personal openness scale measures athletes' openness to discuss their problems and concerns with a sport psychology consultant. Last, the cultural preference scale measures the degree to which athletes identify with their own culture and their preference to work with a consultant of similar background. Participants respond to these items on a 7- point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree" depending on their interpretation of the items with regards to their attitudes towards sport psychology consulting.

The SPA-R was initially used by Anderson, Hodge, Lavallee and Martin (2004) to investigate the attitudes that New Zealand athletes have toward sport psychology. Using a sample of elite athletes (N = 112) the SPA-R was administered at the New Zealand Academy of Sports. Results from this study revealed that participants indicated a positive attitude toward sport psychology (low rating on stigma tolerance and low rating on

personal openness), confidence toward sport psychology and an inclination to work with a consultant who had a similar background to their own. Female athletes were found to be more open toward sport psychology than male athletes in addition to being more confident about the usefulness of sport psychology. Previous experience in working with a sport psychologist was also found to significantly influence attitudes towards sport psychology. Thus, Anderson et al. (2004) concluded that the SPA-R should be administered to male athletes who have not been exposed to sport psychology in order to determine their attitudes so that an appropriate intervention could be constructed since males were more likely to demonstrate negative attitudes toward sport psychology.

Martin (2005) employed a sample of high school athletes (*N*= 362) and college student athletes (*N*=431) to assess attitudes towards sport psychology and also using the SPA-R. Results from this study supported some of the aforementioned findings of Anderson et al. (2004) in that individuals who have been previously exposed to sport psychology displayed a more positive attitude when compared to those who had not been exposed. Both high school and college male athletes reported higher ratings on the stigma tolerance scale when compared to their female counterparts. Female athletes, on the other hand, were found to be more tolerant of working with consultants from a variety of ethnic backgrounds. Martin (2005) did find that high school athletes generally possessed slightly more negative attitudes than college athletes. Lastly, results indicated that athletes who participated in physical contact sports were more likely to have a negative attitude toward sport psychology when compared to those who participated in non-contact sports.

Lavallee et al. (2005) also used the SPA-R to assess the attitudes toward sport psychology of (N = 240) Irish athletes in an attempt to replicate the findings of previous

studies by Andersen et al. (2004) and Martin (2005). Results from this study revealed that athletes reported an overall positive attitude toward sport psychology. More specifically participants scored moderately high on the stigma tolerance scale, low on the personal openness scale, moderately high on confidence in sport psychology and low on the cultural preference scale. Thus, it appeared that the participants in this study were generally open to using sport psychology.

It can be surmised that the SPA-R has value in assessing the attitudes that athletes may have toward sport psychology. Furthermore, the results gained from these assessments according to Andersen et al. (2004), Lavallee et al. (2005) and Martin (2005) can be used to provide a better understanding of the attitudes athletes may possess toward sport psychology. Lavallee et al. (2005) supported this assertion by stating that if sport psychology consultants have a better understanding of athletes' attitudes they would be more prepared to deliver services in a manner that meets athletes' needs. Furthermore, findings with regard to gender and previous experience to sport psychology should be given serious consideration since they have been found to significantly influence attitudes toward sport psychology. Accordingly, one could assume that given the benefits that can be derived from assessing athletes' attitudes toward sport psychology that a similar assessment of athletic trainers' attitudes could be equally beneficially.

Among the many sport psychology related skills that have been successfully applied to rehabilitation are goal setting (Larson et al., 1996; Theodorakis et al., 1997; Scherzer et al., 2001) imagery/relaxation (Cupal & Brewer, 2001; Ross & Berger, 1996; Sordoni, Hall, & Forwell, 2000), and motivation (Francis et al., 2000; Wiese-Bjornstal & Smith, 1993; Wiese, Wiese, & Yukelson, 1991). Thus, it should come as no surprise that

some athletic trainers have stated that psychological skills such as those previously mentioned are important to rehabilitation (Francis et al., 2000; Wiese, Wiese, & Yukelson, 1991). Yet, given the documented success of these psychological skills within the context of rehabilitation, some researchers have found that sport medicine professionals, more specifically athletic trainers, report a lack of exposure to sport psychology and education about sport psychology and by extension sport psychology skills (Gotsch, 2003; Greenfield, 1997; Moulton et al., 1997).

Athletic Trainers' Attitudes Toward Sport Psychology

Consequently, using a similar argument presented previously with regard to athletes, one could postulate that it may be beneficial to assess athletic trainers' attitudes toward sport psychology and then present them with information about the field that will encourage and foster their usage of sport psychology and sport psychology skills within their rehabilitation programs. However, the literature has provided very little documentation about any psychometrically sound assessments of athletic trainers' attitudes toward sport psychology. The few existing reports of assessment of athletic trainers focus mainly on attitudes and beliefs toward the application of psychological skills to rehabilitation (Larsen, Starkey, & Zaichkowsky, 1996; Wiese, Weiss & Yukelson, 1991), attitudes towards the implementation of a sport psychology program (Gotsch, 2003), and attitudes towards sport psychology use in the athletic training room (Ballek (2002).

Wiese, Weiss and Yukelson (1991) were the first to pioneer the assessment of athletic trainers' attitudes albeit along with their perceptions toward psychological skills within the rehabilitation context. They surveyed athletic trainers (N= 115) at a regional

meeting using a self-constructed instrument consisting of three 12-item instruments asking participants to rate: the importance of psychological factors in differentiating athletes who coped successfully and those who didn't cope successfully with injury, the effectiveness of psychological techniques in facilitating athletes' ability to cope with their rehabilitation, and the importance of athletic trainers' knowledge of psychological techniques in dealing with injured athletes.

Wiese, Weiss, and Yukelson (1991) found that the sample rated eight characteristics: willingness to listen, positive attitude, intrinsic motivation, willingness to learn about rehabilitation techniques, mental toughness, high self esteem, goal setting, and emotional maturity as those psychological factors that distinguished between those athletes who successfully coped with injured when compared to those who did not.

With regard to the effectiveness of psychological techniques in facilitating injury rehabilitation the researchers found that eight out of the 12 techniques were rated as effective. These techniques were interpersonal communication, the use of positive reinforcement, coach support of the athlete, keeping the athlete involved with the team, focusing on short term goals, the use positive self thoughts, increasing athletes' understanding of the rehabilitation process, and using a variety of rehabilitation exercises. Lastly, the athletic trainers rated five out of the 12 psychological techniques as "important" to "very important" in their role in dealing with injured athletes. These techniques were positive communication style, setting goals, enhancing self confidence, understanding anxiety and stress, and reducing depression.

Thus, it could be concluded that these athletic trainers possessed a fairly positive attitude towards psychological techniques and their usefulness within the context of

rehabilitation. Furthermore, the authors also believed that these findings supported previous findings by Wiese and Weiss (1987) in that psychological techniques should be incorporated into rehabilitation. It must be mentioned, however, that this study used an instrument that was self constructed and no psychometric properties were reported. Also, the sample appeared to be limited since the study was only conducted at one regional meeting. As a result, it could be surmised that the results of this study cannot be generalized to other athletic trainers with regard to the attitudes they may hold toward sport psychology.

Larsen, Starkey, and Zaichkowsky (1996) also surveyed athletic trainers with regard to their attitudes, beliefs, and use of psychological techniques within rehabilitation. They surveyed a sample of athletic trainers (N= 499) using the Athletic Training and Sport Psychology Questionnaire (ATSPQ). This questionnaire was adapted from Wiese, Weiss and Yukelson (1991) but expanded to include additional sections. Among the new sections added were how often athletic trainers had encountered certain conditions associated with injury, behaviors that injured athletes exhibit when they are coping/not coping well with injury, frequency of referrals, psychological skills used in working with injured athletes, and their beliefs about the importance of learning about certain psychological skills in enhancing their work with injured athletes.

The athletic trainers in this study revealed that they observed conditions such as stress/anxiety, anger, treatment compliance, and depression associated with athletic injuries. Furthermore, very similar to Wiese, Weiss, and Yukeleson (1991), the current study sample indicated that behaviors such as a positive attitude, motivation to do hard work, seeking knowledge about the injury, and focusing on goals during rehabilitation

distinguished those who coped successfully with their rehabilitation in comparison to those who did not. Likewise, the top five interventions were very similar in that this sample also indicated a preference for using goal setting, positive self thoughts, variety in the rehabilitation programs, and effective communication. Lastly, they indicated the aforementioned in addition to listening skills as important skills needed to enhance their work with injured athletes.

Consequently, Larson at al. (1996) stated that athletic trainers in this study seemed to display a positive attitude toward sport psychology. Furthermore, they suggested that the education of athletic trainers should incorporate sport psychology due to the favorable feedback obtained via the study. This study, although an improvement on the Wiese, Weiss, and Yukeleson (1991) study since the sample used was much more representative, still had a major drawback associated with the lack of psychometric properties reported for the ATSPQ.

This major drawback with regard to the assessment of athletic trainers' attitudes continued even with more recent studies such as those conducted by Ballek (2002) and Gotsch (2003). Ballek (2002) in one component of a much larger study, investigated the attitudes of athletic trainers concerning the use of sport psychology in the athletic training room. This study utilized a sample of athletic trainers (N=1,520) but like the previously mentioned studies used a self-constructed 19-item survey to assess athletic trainers' attitudes. This survey consisted of items addressing the importance of knowledge of sport psychology, use of interventions, and the desire for further education with regard to sport psychology. Subjects were asked to rate the items in these areas on a 7-point Likert scale ranging from 1 = "totally disagree" to 7 = "totally agree." Results supported the

previous studies in that athletic trainers were found to have expressed an overall positive attitude toward sports psychology although, in this particular study females were found to have expressed a much more positive attitude in comparison to their male counterparts. On the other hand, male athletic trainers reported using more psychological interventions as well as making more referrals in comparison to the female athletic trainers.

The author concluded that athletic trainers overall do seem to possess a positive attitude toward sport psychology. These positive attitudes may seem warranted and, according to the author of this study, may indicate the athletic trainers' willingness to learn more about sport psychology. However, using the overarching concept of the current proposal, an accurate assessment of attitudes (using a psychometrically sound instrument) may be needed to truly determine athletic trainers' attitudes toward sport psychology. Furthermore, the results from the current study, given the fact that the instrument used was not psychometrically validated, may not be accurate.

Gotsch (2003) also assessed attitudes of athletic trainers but her study was plagued with similar problems associated with the Ballek (2003) study. That is, like Ballek (2003), the assessment of attitudes in this study utilized a slightly revised version of Ballek's (2002) instrument and was also a small component of a much larger study. The attitudinal assessment in this study focused primarily on questions related to the implementation of a formal sport psychology course and psychological aspects of injury education. Results supported the findings of Ballek (2002) since participants indicated that athletic trainers should have knowledge about sport psychology and that sport psychology interventions could assist athletes during their rehabilitation. However, unlike Ballek (2002), no gender differences were found. Additionally, the results also found that

participants perceived the implementation of a sport psychology program and components to address the psychological aspects of injury to be very important.

Like all of the aforementioned studies with regards to athletic trainers' attitudes toward sport psychology, Gotsch's (2003) study also revealed that athletic trainers possessed positive attitudes. Gotsch (2003) also suggested that attitudes toward sport psychology education could be extremely helpful in determining how this knowledge could be presented to athletic trainers. However, given the lack of a psychometrically sound instrument, one can conclude that the results of this study may not represent an accurate assessment of athletic trainers' attitudes. Furthermore, the void with regards to any assessment of athletic training students' attitudes toward sport psychology still seems to exist. Although, an assumption can be made that athletic training students' attitudes will be similar to those of athletic trainers, the presence of negative stigmas associated with the term psychology (Martin, Kellmann, Lavallee, & Page, 2002) should be taken into consideration. Consequently, an assessment of athletic training students' attitudes toward sport psychology may be needed.

Athletic Training Students' Attitudes Toward Sport Psychology

Harris, Demb, and Pastore (2004) have been the only documented study done assessing athletic training students' attitudes toward sport psychology. It must, be stated, however, that the word "attitude" was only mentioned in the title of the study. All of the aspects of the study made reference to perceptions. Furthermore, in each of the three research questions the word perception was used. Thus, like previous studies, the current study did not truly represent an assessment of attitude but it did represent a step in that direction. This study actually investigated athletic training students' perceptions toward

psychological issues in rehabilitation upon their completion of a course addressing psychological issues in rehabilitation. This study utilized a sample of eighteen students enrolled in an athletic training education program and one graduate athletic trainer. All participants were pre-tested and post tested via the use of a questionnaire and interviewed to determine if their perceptions changed as a result of a course addressing psychological issues.

A self-constructed questionnaire, the Perceptions of Psychological Impact of Injury Questionnaire (PPIIQ), consisting of 23-items distributed among four scales was used to assess athletic training students' perceptions. These four scales were stress reactions (five items), sport influences (four items), social influences (six items), and academic influences (eight items). Respondents were asked to rate the items on these scales using a 7-point Likert scale with 1 = "strongly disagree" and 7 = "strongly agree." Content validity was established for the questionnaire by seven content experts and three instrument design experts. A subsequent field test using three ATCs was also conducted that resulted in some items being deleted or moved around. A final field test using athletic training students from another institution was also conducted. They provided feedback with regard to clarity of the items that resulted in additional revisions. Finally, a pilot study was conducted at another institution to establish reliability resulting in the creation of the final questionnaire. For this pilot study it was determined that an acceptable Cronbach alpha for each construct was 0.70 with items within each construct being considered suspect with an item total correlation of < 0.25. These suspect items were either removed or revised.

Results from this study indicated in all but one of the constructs on the questionnaire respondents reported significantly increased summated scores on the post-test. More specifically, respondents scored higher on the sport influences construct, indicating that they perceived themselves to be more aware of the effect of influences such as time in season and the division the athlete was competing in had on the amount of psychological distress an athlete experienced as a result of an injury. They also reported being more cognizant of the effect that social influences, such as social support, had on the amount of psychological distress experienced. Lastly, respondents also reported increased perception scores with regard to the effect that the academic impact had on the amount of psychological distress experienced by athletes. The only construct that was found to not be statistically different was stress reactions. The authors postulated that this was as a result of the high level of knowledge about this construct displayed by the participants in the pre-test.

The interviews also yielded some very positive opinions with regard to the course. Among the notable comments made by the sophomore participants were “the new course should be made a permanent addition to the athletic training curriculum,” “psychology and injury rehabilitation go hand in hand,” “the course enabled me to have a better understanding of the whole psych of injury process,” and “you have to watch the psychological in order to fully evaluate the rehab.” The juniors’ notable comments were “this course really opened my eyes to the things we need to do differently” and “it is very important to collaborate with the injured athletes in the development of rehabilitation goals and plans.” Seniors’ notable comments were “I have been incorporating techniques learned in the course into my educational experiences,” “most ATCs and ATSs do not

take the role of psychology in rehabilitation seriously enough," "the role of psychology in rehabilitation is a lot bigger than expected," and "I now view the role of psychology intertwined with the physical aspect of rehabilitation."

It must be mentioned, though, that the results obtained in the study were also used as a means to confirm the reliability scores obtained in the pilot study. The Cronbach alphas obtained were lower than those obtained in the pilot study. The stress reaction construct was found to be 0.54 (0.69 reported earlier), sport influences 0.61 (0.70 reported earlier), social influences 0.43 (0.78 reported earlier), and academic impact 0.68 (0.72 reported earlier). The authors proposed that the decreased alphas were due to the small sample size and differences in the sample. That is, the sample used in the pilot study was athletic training students at a Division III school while the sample used for the actual study were from a Division I school. Consequently, they concluded that the differing perceptions of the study could have resulted in the varying responses received between the pilot study and the actual study. Thus, the authors stated that it is "inappropriate to conclude that the PPIIQ is not reliable" (p. 104). Instead they stated that the PPIIQ may have some reliability but is "less well constructed than other scales" (p. 104).

As a result, it could be concluded from this study that athletic training students' perceptions toward psychological issues can be amended as a result of exposure to sport-psychology related course materials. However, these results must be interpreted carefully since the PPIIQ by the authors' own account may not be reliable. Furthermore, validity had not been determined for the instrument. Consequently, one can make the assumption that if perception can be positively affected due to the administration of an educational

intervention, in this case a sport psychology course, it stands to reason that attitudes similarly can be affected.

Modifying Attitudes Toward Sport Psychology

Attitudes according to Noe (2002) attitudes are "a combination of beliefs and feelings that predispose a person to behave a certain way" (p.108). These attitudes according to Fine (1992) are fluid, as opposed to being hardened and crystalline, and are dependent on the information presented. Pettijohn (1989) also asserted that attitudes inherently guide individuals towards specific behaviors. Chubon (1992) also stated that attitudes motivate behavior. Consequently, using the theoretical framework of the Theory of Reasoned Action (TRA; Ajzen, 1985; Fishbein & Ajzen, 1975) interventions can be presented that are aimed at positively influencing attitudes that will ultimately influence behaviors with regard to sport psychology. It must be mentioned, though, that despite the positive findings with regard to athletic trainers' attitudes in the aforementioned studies one irregularity must also be noted. Consideration must be given to the methodological issues associated with these and the other studies conducted in this area. Consequently, it will not be appropriate to generalize these results to other athletic trainers or athletic training students.

As a result, the researcher postulates that athletic training students may possess varying attitudes toward sport psychology. That is, some may possess positive attitudes while others may hold negative attitudes toward sport psychology. These varying attitudes can possibly be positively influenced by an educational intervention. Therefore, it maybe worth investigating the literature to determine what has been done with regard to assessing and changing attitudes. A search of the social psychology literature revealed

that the consistency theory postulates that is possible to change individuals' attitudes if new information that is "inconsistent with their previous viewpoints or if existing inconsistencies in their beliefs and attitudes are pointed out to them" (Oskamp, 1977, p. 192). Furthermore, the consistency theories suggest that individuals are rational and thus change their attitudes in accordance with new information presented. These consistency theories, more specifically Osgood and Tannenbaum's (1955) congruity theory, postulates that attitudinal change can take place as a result of persuasive communication or information presented by a relevant and credible source. Studies by Rokeach and Rothman (1965) demonstrated the effectiveness of the individual delivering the message as well as the message itself in affecting attitude change. Kerrick (1958) also supported the use of the congruity theory in predicting attitude change when the source delivering the message was perceived as being prestigious. Thus, given the impact of information within the context of the congruity theory the author believes that attitude change among athletic training students could be possible after the administration of an educational intervention.

However, as previously mentioned, there appears to be a lack of assessments of athletic training students' attitudes with the exception of the aforementioned study by Harris, Demb and Pastore (2004). Jha, Bekker, Duffy, and Roberts (2007), though, conducted a systematic review of the literature for studies assessing and modifying medical students' attitudes towards professionalism. Results from this review revealed that of the articles reviewed (N = 97), 17 studies assessed the impact of educational interventions on attitudes. Of this sample, seven studies featured the administration of a course, three featured individual teaching sessions and seven curricula incorporating

teaching professionalism. It was reported that in three of the studies no differences were found in attitudes pre and post intervention. However, the remainder of the studies reported a change in attitudes with regard to professionalism. Thus, it could be assumed from the systematic review that attitudes can be positively affected by educational interventions.

Zakrajsek (2007), using a sample of 28 coaches in a pilot study, administered the SPA-RC 2, a shortened and adapted form of the SPA-R, to assess coaches' attitudes toward sport psychology. Participants were then exposed to a 45-minute educational intervention following which their attitudes toward sport psychology were once again assessed. Results revealed that participants' scores on the confidence in sport psychology consulting scale significantly increased while there were no changes on the other scales, i.e., stigma tolerance, personal openness and cultural preference.

Zakrajsek (2007) thus provided some preliminary utility with regard to the use of an instrument similar to the SPA-R for assessing attitudes pre and post intervention. Zakrajsek (2007) also found some success in modifying attitudes on the SPA-RC 2, while also postulating that additional follow-up assessments may be warranted to determine how long these changes would have lasted. It must be mentioned, however, that the absence of a control group should be taken into consideration when quantifying the success of the intervention.

Much of the research with regard to modifying attitudes, though, have focused on assessing and changing attitudes albeit primarily within the area of disability. Seminal work by Roeher (1961) and Golin (1970) have showed that that negative attitudes, toward individuals with disabilities could be modified via increased information that could be

delivered via an educational intervention. Krahe and Altwasser (2006), using a sample of ninth graders (*N*= 70), found success in assessing attitudes toward individuals with disabilities, administering an intervention, and seeing a resulting change in attitudes. They used an experimental pre-post design to assess the effectiveness of their intervention that consisted of a cognitive component (educational) and a behavioral component (applied). Results revealed that attitudinal changes occurred via a combination of both components (cognitive and behavioral). Furthermore, attitude changes were found to be present post intervention as well as up to three months later. Attitudinal scores among the participants in the control group, however, did not change from baseline to the subsequent two measuring points.

Hunt and Hunt (2004) also assessed attitudes toward disabilities in addition to evaluating the effectiveness of a brief educational intervention. Hunt and Hunt (2004) used a quasi-experimental design (Solomon Four group design) with a sample of 190 students enrolled in an undergraduate course. The researchers also wanted to deliberately assess the effectiveness of an hour-long intervention (due to time constraints) as opposed to a more elaborate intervention. Results from this study revealed that there was a significant effect for the influence of the intervention even after controlling for factors such as gender and previous exposure to individuals with disabilities. Given these results, the authors postulated that such brief interventions/training could be very important in influencing attitudes. Furthermore, a suggestion with regard to utilizing individuals with disabilities to deliver interventions/training (applying Allport 1994 contact hypothesis) could also be effective according to Hunt and Hunt (2004).

Thus, given the void of research about changing athletic training students' attitudes, the literature has shown, albeit in other areas, that it is possible to affect change in attitudes via the administration of an educational intervention. These educational interventions have been shown to be effective with regard to fostering change in attitudes. Consequently, the author believes that it is worth exploring the literature to determine if educational interventions have been used with athletic training students and athletic trainers. These educational interventions possibly have the ability to influence attitudes, as well as intentions and ultimately behavior.

Education Interventions with Athletic Training Students and Athletic Trainers

Although the use of educational interventions has been found to be successful in changing attitudes with regard to disabilities and medical students with regard to their professionalism, the primary purpose of this section is to explore the use of educational interventions with athletic training students and athletic trainers. A search of the literature revealed that these types of interventions have in fact been used with athletic training students (Harris, Demb, & Pastore, 2004) and athletic trainers to affect change in sport psychology knowledge (Pero, 1995) as well as the use of psychological rehabilitation interventions (Scherzer, 2004).

The Harris, Demb, and Pastore (2004) use of an educational intervention with athletic training students have been previously mentioned in the aforementioned sections. Pero (1995), on the other hand, wanted to assess the effectiveness of a workshop designed to assist athletic trainers in injury prevention and rehabilitation. As a result, Pero (1995) developed a five-hour workshop to not only introduce sport psychology to athletic trainers but more importantly to show how applied sport psychology could be

incorporated into athletic training and injury rehabilitation. Some of the topics covered in the workshop included antecedents of injury, emotional response to injury, assessment procedures, intervention techniques, and rehabilitation problems. This workshop was offered at an Eastern Athletic Trainers' Association annual meeting as a means of obtaining continuing education units.

Using a pre-post design, athletic trainers (*N*= 36) who signed up to participate completed a Sport Psychology Knowledge Test (SPKT) both prior to and upon the completion of the workshop. The workshop was also offered as a home study option in which 32 athletic trainers also participated. They were also required to complete the SPKT prior to the course as well as upon its completion. All participants were also sent via mail a one-month follow up to determine if they had utilized any of the techniques learned in the workshop. Results revealed that the athletic trainers who participated in the study overall possessed a low overall knowledge with regard to sport psychology. However, participants did experience an increase in their knowledge about sport psychology and its application to athletic training by the end of the workshop in comparison to the control group. No differences, though, were found between those who participated in the workshop or those who completed it via home study. Furthermore, athletic trainers indicated that one month post workshop they were using some of the techniques introduced at the workshop. Pero (1995) also found that athletic trainers also reported that they still retained the information one year later. As a result, it can be concluded that using an educational intervention format is a viable way to help increase knowledge about sport psychology.

Scherzer (2004), as part of a larger study, used a brief educational intervention to introduce athletic trainers and athletic training students to psychological skills and its application to athletic training, more specifically, injury rehabilitation. The investigator used a sample of five athletic trainers and three athletic training students. Participants were randomly placed into either the experimental group or the control group. Both groups were administered baseline assessments to determine their usage of psychological skills. However, only the experimental group received the educational intervention (four 1-2 hour sessions over the course of three weeks). Results indicated that there were no differences between the groups on their baseline use of psychological skills. Results also did not indicate any differences in the use of psychological skills post intervention for those participants in both the control group and the experimental group due to low participation numbers.

Thus, Scherzer (2004) was unable to assess the effectiveness of the educational intervention but a number of important lessons, with regard to delivering educational interventions to athletic trainers, were learned. First, Scherzer (2004) suggested that the time commitment of four 1-2 hours sessions over the course of two weeks was much too time consuming for athletic trainers due to their hectic schedules. As a result, it was concluded that it would be unrealistic for athletic trainers to participate in these types of educational interventions. Instead, Scherzer (2004) suggested that a day-long session would probably be more convenient. However, with regard to athletic training students, the researcher suggested that such educational interventions would be welcomed by athletic training students and program directors if they were incorporated during a "pre-scheduled classroom time."

In conclusion, one can surmise from both Pero (1995) and Scherzer (2004) as well as Harris, Demb, and Pastore (2004) that educational interventions have been utilized somewhat successfully with athletic trainers and athletic training students. Although these accounts provided varying degrees of success, Scherzer (2004) provided some helpful advice with regards to intervention length since athletic trainers and athletic training students have hectic schedules. This must be given some consideration since athletic training students usually have classes scheduled in the morning and are usually with their teams during the afternoon. Thus, researchers can assume that the likelihood of gaining access to this population will be dependent on the length of the educational intervention.

Length of Educational Interventions

The interventions that have been described in this review literature for the most part, with the exception of Scherzer (2004), have all been found to be effective. However, it must be mentioned that all of these interventions have been of varying lengths. As previously mentioned careful consideration needs to be given to the length of the educational intervention to not only determine its effectiveness but just as importantly to determine if access will be granted to the sample in order to deliver the educational intervention.

Krahe and Altwasser (2006) used an intervention that was designed to change negative attitudes toward individuals with disability. This educational intervention consisted of two sessions for a total of 90 minutes. Furthermore, the researchers incorporated these sessions into two school periods. Hunt and Hunt (2004) also delivered an educational intervention with regard to changing attitudes toward people with

disabilities using an hour-long session. Based on the results and feedback Hunt and Hunt (2004) postulated that brief educational interventions could be successfully implemented into workplace training as well as educational curriculums.

Zizzi and Perna (2003) within the area of sport psychology evaluated the effectiveness of a 45-minute psychoeducational intervention on athletes' stages of change with regards to using mental training. These one-time 45-minutes interventions, using a workshop format, were found to be effective and resulted in change in participants' pro scores on decisional balance and their contemplation scores in the stages of change. Thus, it can be concluded that an educational intervention of such duration could be effective in causing change.

Zakrajsek, (2007) also within the sport psychology realm, assessed the effectiveness of a 45-minute educational intervention on attitudes toward sport psychology, among other things. Similar to the aforementioned Zizzi and Perna (2003) study, these workshop formats were found to be successfully in modifying attitudes toward sport psychology. Therefore, given the results of this study in addition to Zizzi and Perna (2003), the researcher believes that a brief educational intervention could be effective in fostering change.

Pero (1995), however, used a five-hour educational intervention to educate athletic trainers about sport psychology and its application to athletic training. This educational intervention, though, was presented at an annual meeting and such a format and length, although very exhaustive, may not be practical within academia. Scherzer (2004), also using a sample of athletic trainers as well as athletic training students delivered four educational interventions, each 1-2 hours in length, over a two-week

period. This method also seemed to be too time intensive since participation rates in this study were extremely low. However, Scherzer (2004) did postulate that educational interventions geared toward athletic trainers should probably be more similar to day-long workshops. Scherzer (2004) further suggested that if such interventions are to be geared toward athletic training students they should be incorporated into "pre-scheduled classroom time."

However, regardless of the length of the educational intervention delivered it must be stated that educational interventions have been found to be effective in fostering change with regard to attitudes. The point of concern in the present study is the fact that the length of the education intervention could influence program directors' willingness to allow the researcher to utilize their students in the study. As a result, the researcher has decided to follow the advise of Scherzer (2004) and incorporate the educational intervention into a "prescheduled classroom time." Validity for using this time period has also been provided by the success of Zakrajsek, (2007) and Zizzi and Perna (2003). Hopefully, the effectiveness of these interventions will in all likelihood be beneficial to the athletic training students but also to the athletes with whom these individuals work. This assumption is made based on the status and role that athletic training students hold in relation to athletes.

Athletic Training Students' Status in Relation to Athletes

Athletic trainers serve a multitude of roles in relation to athletes. That is, athletic trainers are responsibly for "all phases of health care in an athletic environment, including preventing injuries from occurring, providing initial first aid and injury management, evaluating injuries and designing and supervising a timely and effective

program of rehabilitation that can facilitate the safe and expeditious return of the athlete to activity" (Arnheim & Prentice, 2000, p. 8). Most important in relation to athletes, athletic trainers deal exclusively with an injured athlete from their initial injury until he/she is allowed to return to unrestricted activity (Prentice, 1991). As a result athletic trainers usually spend extensive periods of time in close proximity to the athletes with whom they work with (Jensen, 1996). This, according to Etzel and Ferrante (1993), can usually leads to athletes and athletic trainers developing special relationships that, according to some have led athletic trainers to being viewed as "the most trusted people within the athletic community" (p. 275).

Smith and Milliner (1994) also stated that the aforementioned close proximity also promotes the confidence, trust, intimacy, and high personal regard that athletes have for athletic trainers. As a result, the athletic trainer usually becomes the person who is most likely to hear or witness any signs of emotional disturbance (Sach, Stiler & Schwille, 1993). This is one of the main reasons why athletic trainers are usually considered the first line of defense (Heil, Bowman, & Bean, 1993).

Athletic training students, even more so than athletic trainers, spend a great deal of time in close proximity to injured athletes at the collegiate level. Berry, Miller, and Berry (2004) corroborated this assertion by conducting a study investigating the amount of time that athletic training students spend in active learning with regard to athletic training. Results revealed that athletic training students daily spent an average of 21 minutes conducting or supervising therapeutic exercises, 23 minutes performing therapeutic modalities, nine minutes administering treatment, and nine minutes doing evaluation. These times, thus, indicate that athletic training students are in close daily

contact with injured athletes at the very minimum of one hour per day. During this time, it is quite plausible for athletic training students to form close friendships with the athletes with whom they work (Walk, 1992). Furthermore, due to the similarity in ages and college experiences, athletic training students are easily able to "build rapport, gain trust and display empathy to injured athletes during injury management, rehabilitation and wellness activities" (Doyle, 2002, p. 34).

O'Leary and Wilson (1975) and Cramer Roh and Perna (2000) have stated that athletic trainers are considered to be in an ideal position to introduce sport psychology to athletes. Consequently, it stands to reason that athletic training students are probably in an even better position to not only influence athletes' attitudes toward sport psychology services but possibly also to introduce them to basic psychological skills that could be incorporated into their rehabilitation programs.

Although perfectly positioned, Wiese and Weiss (1987) have asserted that athletic trainers and in all likelihood athletic training students lack in-depth knowledge about sport psychology and its application to athletic training. This, lack of training and knowledge has rightly led to athletic trainers not perceiving themselves as being competent in utilizing some sport psychology techniques within the rehabilitation context (Gordon, 2002). This seems to be rather unfortunate since Gotsch (2003) has stated that athletic trainers are in general agreement that psychological interventions greatly help athletes during the course of their rehabilitation as well as significantly decrease rehabilitation time. However, the literature has been replete with documentation indicating that athletic trainers perceive themselves as lacking the necessary training/exposure to sport psychology.

Athletic Trainers and Sport Psychology Education

Official documentation of this lack of training/exposure to sport psychology initially originated from the work of Gordon, Milios and Grove (1991). Using a sample of 235 physiotherapists in Australia and New Zealand, they found that 84% indicated they did not perceive themselves to be competent in dealing with the psychological aspects of injury. More important, 87% stated that they would like to receive training in this area. This assertion comes as no surprise since previous literature (Brewer, Van Raalte & Linder, 1991; Danish, 1986; Feltz, 1986; Wiese & Troxel, 1986; Wiese & Wiese, 1987; Yukelson, 1991) have all supported the use of psychological interventions especially in the rehabilitation context.

This revelation, though, was not limited to physiotherapists in Australia and New Zealand since Wiese, Weiss and Yukelson (1991), upon the conclusion of surveying 115 United States based athletic trainers, made a similar recommendation based on the results they obtained. This recommendation was made because the overall results from this study indicated that athletic trainers perceived sport psychology, more specifically psychological skills and techniques, to be very important to the rehabilitation process. Among the psychological skills and techniques found to be highly rated were motivation, goal setting, and self thought. Wiese, Weiss and Yukelson (1991) thus postulated that although athletic trainers believed in the importance of the aforementioned techniques within the context of rehabilitation they did not feel qualified to implement/teach these techniques. As a result, Wiese, Weiss, and Yukelson (1991) suggested that athletic trainers need to be educated more about sport psychology. Furthermore, they stated that

"educational presentations… as well as foundation coursework should be added for future athletic trainers" (Wiese, Weiss, & Yukelson, 1991, p. 23).

Later Larson, Starkey, and Zaichkowsky (1996) reiterated this assertion based on the results they obtained when they assessed the attitudes, beliefs, and application of psychological skills to rehabilitation. This sample not only perceived the psychological aspect of injury to be "very important" but an overwhelming percentage (85%) also indicated that a course in sport psychology would be "relatively important" or "very important" to their education as an athletic trainer. As a result, Larson, Starkey, and Zaichkowsky (1996) surmised that a course in sport psychology should be incorporated into the formal education structure of athletic training. They also suggested that sport psychology techniques such as goal setting, relaxation, imagery, and communication skills should be incorporated into therapeutic exercise coursework making their use much more practical.

Ford and Gordon (1997) also suggested that athletic trainers should be exposed to more sport psychology content within their education programs. Using a sample of physiotherapists *(N*= 500) from Australia, New Zealand, and Canada, Ford and Gordon (1997) surveyed their perceptions of the importance of psychological skills in rehabilitation. Results from this study indicated that these professionals wanted to achieve more effective rehabilitation programs, and they believed that knowledge about sport psychology and its application to rehabilitation would be important in doing so.

Most recently, Fisher and Wrisberg (2006) conducted an informal poll of athletic training students at their institution with regard to what athletic training students want to know about sport psychology. Respondents revealed that they would like to know what

motivates athletes post injury, what they can do help build athletes' confidence post injury, and how much influence athletes' mental states have on injury recovery. As a result, it seems that despite the calls for increased exposure to sport psychology and the competencies addressing psychosocial intervention and referral there remains a distinct need to increase athletic training students' exposure to sport psychology.

This need was emphasized by Gotsch (2003), who stated that there has "not been a definite increase in the formal education in sport psychology of ATCs over the past 10 years" (p. 52). However, the question that now arises is how can this increased knowledge and exposure be efficiently and effectively delivered? Gotsch (2003), in an assessment of athletic trainers' attitudes toward formal sport psychology education, found that although athletic trainers reported low exposure to sport psychology they also reported a high perceived importance of psychological skills. Thus, she concluded that one method that could be used to address this deficiency was via the introduction of sport psychology to student athletic trainers at the undergraduate level. Gotsch (2003) further stated that sport psychology courses at the undergraduate level could create an initial knowledge as well as an interest base upon which the student can build throughout his/her educational career. Additionally, Gotsch (2003) also stated that introducing sport psychology at the undergraduate level has the ability to "create a plan for educating" (p. 45) future athletic trainers in the field of sport psychology and its application to the athletic training profession.

Greenfield (1997) added that any formal education in the area of sport psychology could potentially introduce future athletic trainers to a few sport psychology theories in addition to some of the basic skills, strategies, and interventions that could be used in

injury rehabilitation. This early exposure to sport psychology, in the author's opinion, has the potential to increase the tendency and willingness of future athletic trainers to utilize sport psychology services and techniques in addition to making the appropriate referrals within the context of injury rehabilitation.

Cramer Roh and Perna (2000) also recommended the addition of formal education in the area of sport psychology to athletic training programs. They postulated that a single course in psychology of sport injury could be immensely helpful to athletic training students, and by extension athletic trainers, in their ability to recognize signs of distress as well as implement psychological skills in rehabilitation. They also made the recommendation that in the absence of qualified personnel to instruct these courses a psychopathology course could be added to the curriculum. Such a course could help increase athletic training students' ability to recognize psychological distress and make the appropriate notification and consequent referral.

Harris, Demb, and Pastore (2004) also made a similar recommendation based on their belief that athletic trainers and athletic training students are much less prepared to construct rehabilitation programs that address the psychological reactions experienced by injured athletes. As a result, they postulated that with increased academic preparation via coursework these future athletic trainers could become more prepared to deal with these situations. Furthermore, they also made the recommendations that this academic preparation could be easily achieved with the addition of as little as one lecture within a course or more extensive via the addition of an entire course dedicated to this area. The onus of doing either is, however, up to individual institutions since the psychosocial competency could in fact be covered by as little as one lecture.

According to Larson, Starkey, and Zaichkowsky (1996) and Greenfield (1997), however, formal courses, similar to those mentioned above, sometimes have the tendency to fail to provide students with sufficient knowledge, training, and practice in order effectively utilize these skills and strategies. These courses usually tend to focus predominately on the theoretical aspects of sport psychology and lack emphasis on the practical applicability of sport psychology within the athletic training domain (Greenfield, 1997). Ford and Gordon (1997) responded to this potential problem by stating that these sport psychology courses should be much more practical in nature, allowing students to gain experience and confidence in applying psychological skills and techniques within the context of rehabilitation.

However, formally incorporating sport psychology coursework into athletic training education programs may not be the only way to increase athletic trainers' exposure to athletic training. Pero (1995) found that using informal methods such as a workshop could be a potential solution. Pero (1995) found that using a workshop format exposed athletic trainers to not only the theoretical aspects of sport psychology but also its practical application to athletic training and injury rehabilitation. Results assessing the effectiveness of this format found that those athletic trainers who participated retained the psychological skills and strategies up to one year after initially attending the workshop. Scherzer (2004) also suggested that athletic trainers would probably be more inclined to participate in and gain knowledge from day-long "one shot" sessions in which all psychological topics were covered and presented. Likewise, Scherzer (2004) also stated that athletic training students could probably be exposed to sport psychology via informal sessions that are incorporated into pre-scheduled classroom time. These two suggestions

could possibly increase athletic training students chances of being exposed to sport psychology with minimal disruptions to their already hectic daily schedules. Cramer Roh and Perna (2000) also advocated the use of informal methods such as the use of guest lectures to supplement the content of existing athletic training courses.

Thus, it is quite possible that athletic training students could be exposed to increased sport psychology content in one of two ways. This can be done either through formal education (classes within educational programs) or via informal sessions (workshops). Regardless of the method used, the experience and knowledge about sport psychology and its application to athletic training and injury rehabilitation have the potential to be extremely beneficial to athletic training students considering that many universities/colleges lack the presence or even access to a qualified sport psychologist (Cramer Roh & Perna, 2000; Larson, Starkey & Zaichkowsky, 1996; Moulton, Molstad & Turner, 1997).

Presence/ Access to a Qualified Sport Psychologist

As mentioned above, there appears to be a lack of access to qualified sport psychologists in the event that an athletic trainer may even want to refer an athlete to such a professional. Larson, Starkey, and Zaichkowsky (1996) were probably the first to highlight this need after surveying 482 athletic trainers. Results revealed that 75% of those sampled indicated that they did not have access to a sport psychologist. Moulton, Molstad and Turner (1997), although using a small sample (N=14), found that none of these athletic trainers had access to a sport psychologist. Voight and Callaghan (2001) also found that only 14% of the Division I schools sampled (N= 60) employed a full-time sport psychologist. More recently, Cramer Roh and Perna (2000) corroborated the

aforementioned lack of access to sport psychologists for sport medicine professionals. They further stated that given this unfortunate occurrence it becomes more imperative that athletic trainers and athletic training students have knowledge with regard to the psychological aspect of injury in order to be able to make the appropriate referral. Harris, Demb, and Pastore (2004) also stated that the lack of access/presence of sport psychologists for ATCs will affect the holistic care of injured athletes if ATCs are not trained in the area of sport psychology.

Consequently, if athletic training students are exposed to sport psychology there is an increased likelihood that when they become athletic trainers they will have this basic skill set as well as be open to incorporating sport psychology into their rehabilitation programs. Additionally, these professionals will be at ease making referrals as well as working together with them as members of the sports medicine team. As a result, given the potential benefits that could be derived from educating athletic training students about sport psychology, one has to wonder why this has not yet been done to any great extent.

Summary

Athletic training students, even more so than athletic trainers, spend a great deal of time in close proximity to injured athletes at the collegiate level. During this time it is quite plausible for athletic training students to form close relationships with the athletes with whom they work (Walk, 1992). These relationships, according to the author, could possibly be used to introduce/incorporate basic psychology skills and interventions into rehabilitation programs as well as positively influence injured athletes' willingness and openness to use sport psychology. However, before this can be done the author postulates that it would be helpful to assess athletic training students' attitudes in order to gain a

better understanding of their intentions to utilize sport psychology services (Anderson et al., 2004; Martin, 2005).

Although, the aforementioned concept appears to be noteworthy the literature appears to be lacking documented assessments of athletic training students' attitudes toward sport psychology. Harris, Demb, and Pastore (2004), though, appear to be a notable exception. This study, however, only listed the word "attitude" in its title instead making references to perceptions throughout the study. Other related studies (Ballek, 2002; Gotsch, 2003) assessing attitudes toward sport psychology were only small components of larger studies using instruments/surveys that were not psychometrically tested. Thus, any conclusions drawn from these studies could not be generalized to those studied (athletic trainers) and even less to athletic training students.

Thus, the author postulates that the administration of a psychometrically sound instrument, the SPA-R, could be used to determine athletic training students' attitudes toward sport psychology. Attitudes according to Fine (1992) are fluid, as opposed to being hardened and crystalline, and are dependent on the information presented. Consequently, using the theoretical framework of the TRA as well as Osgood and Tannenbaum (1955) congruity theory educational interventions can be presented to athletic training students aimed at positively influencing attitudes that will ultimately influence behaviors with regard to sport psychology.

Appendix B

Review of Literature References

References

Anderson, A. G., Hodge, K. P., Lavallee, D., & Martin, S. B. (2004). New Zealand Athletes' Attitudes Towards Seeking Sport Psychology Consultation. *New Zealand Journal of Psychology*, *33*, 129-136.

Ajzen, I. (1985). From intentions to action: A theory of focus on these important subgroups. In J. Kuhl & J. Beckman (EDs.), *Action-control: From cognition to behavior* (pp. 11-39). Heidelberg: Springer.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal related behavior: Attitudes, intentions and perceived behavioral control. *Journal of Experimental Social Psychology, 22*, 453-474.

Arnheim, D. D., & Prentice, W. E. (2000). *Principles of athletic training*. Boston, MA: Mc Graw Hill.

Ballek, R. E. (2002). *Sport psychology in the training room: Athletic trainers' perspectives*. Unpublished Masters Thesis, San Diego State University.

Berry, D. C., Millert, M. G., & Berry, L. M. (2004). Effects of clinical field experience setting on athletic training students' perceived percentage of time spent on active learning. *Journal of Athletic Training, 39*, 176-184.

Blue, C. (1995). The predictive capacity of the theory of reasoned action and the theory of planned behavior in exercise research: An integrated literature review. *Research in Nursing and Health*, *18*, 105-121.

Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1991). Role of the sport psychologist in treating injured athletes: A survey of sports medicine providers. *Journal of Applied Sport Psychology, 3*, 183-190.

Cash, T. F., Begley, P. J., McCown, D. A., & Wiese, B. C. (1975). When counselors are heard but not seen: Initial impact of physical attractiveness. *Journal of Counseling Psychology*, *22*, 273-279.

Cramer Roh, J. L., & Perna, F. (2000). Psychology/ counseling: A universal competency in athletic training. *Journal of Athletic Training, 35*, 458-463.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.

Cupal, D. & Brewer, B. (2001). Effect of relaxation and guided imagery, reinjury anxiety and pain following anterior cruciate ligament reconstruction. *Rehabilitation Psychology, 46,* 28-43.

Danish, S. J. (1986). Psychological aspects in the careand treatment of athletic injuries. In P. E. Vinger & E. F. Hoemer (Eds.), *Sport Injuries: The Unthwarted Epidemic* (pp. 345-353) Boston, Massachusetts: Wright.

Doyle, M. (2002). A new dimension for the athletic training room: The spirit of the room. *Athletic Therapy Today*, *7*, 34-35.

Esters, I. G., Cooker, P. G., & Ittenbach, R. F. (1998). Effects of a unit of instruction in mental health on rural adolescents' conceptions of mental illness and attitudes about seeking help. *Adolescence*, *33*, 469-476.

Etzel, E. F., Ferrante, A. P. (1993). Providing psychological assistance to inured and disabled college student athletes. In D. Pargman (Ed.), *Psychological bases of sports injuries* (pp. 265-284). Morgantown, WV: Fitness Information Technology, Inc.

Feltz, D. L. (1986). The psychology of sport injuries. In P. E. Vinger & E. F. Hoemer (Eds.), *Sport Injuries : The Unthwarted Epidemic* (pp. 336-344). Boston, Massachusetts: Wright.

Fine, T. (1992). The impact of issue framing on public opinion: Towards affirmative action programs. *Social Science Journal, 29*, 323-334.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass: Addison-Wesley.

Fischer, E. H., & Farina, A. (1995). Attitudes towards seeking professional help: A shortened form and consideration for research. *Journal of College Student Development*, *36*, 368-373.

Fischer, E. H., & Turner, J. L. (1970). Orientations to seeking professional help: Development and research utility of an attitudinal scale. *Journal of Consulting and Clinical Psychology*, *35*, 79-90.

Fisher, L. A., & Wrisberg, C. A. (2006). What athletic training students want to know about sport psychology. *Athletic Therapy, 3*, 32-33.

Ford, I., & Gordon, S. (1997). Perspectives of sport physiotherapists on the frequency and significance of psychological factors in professional practice: Implications for curriculum design in professional training. *The Australian Journal of Science and Medicine in Sport, 29*, 34-40.

Francis, S. R., Andersen, M. B., & Maley, P. (2000). Physiotherapists' and male professional athletes' views on psychological skills for rehabilitation. *Journal of Science and Medicine, 3*, 17-29.

Godin, G. (1993). The theories of reasoned action and planned behavior: Overview of findings, emerging research problems and usefulness for exercise promotion. *Journal of Sport and Exercise, Psychology*, 5, 141-157.

Godin, G., & Shephard, R. (1990). Use of attitude-behavior models in exercise promotion. *Sports Medicine*, 10, 103-121.

Golin, A. K. (1970). Stimulus variables in the measurement of attitudes towards disabilities. *Rehabilitation Counseling Bulletin*, *14*, 20-26

Gordon, S. (2002). Psychological aspects of recovery from sport injury. *The New Zealand journal of sports medicine, 30*, 98-101.

Gordon, S. Milios, D., & Grove, J. R. (1991. Psychological aspects of the recovery process from sport injury: The perspective of sport physiotherapists. *Australian Journal of Science and Medicine in Sport*, *23*, 53-60.

Gotsch, K. (2003). *Attitudes of certified athletic trainers concerning formal sport psychology education*. Unpublished masters thesis. Ball State University.

Greenfield, D. (1997). *Perceived adequacy of professional preparation in sport psychology among NCAA Division I A head athletic trainers*. Unpublished master's thesis.. Ball State University

Hagger, M., Chatzisarantis, N., & Biddle, S. (2002). A meta-analytic review of the theories of reasoned action and planned behavior in physical activity: Predictive validity and contribution of additional variables. *Journal of Sport and Exercise, Psychology*, 24, 3-32.

Harris, L. L., Demb, A., & Pastore, D. L. (2004). Perceptions and attitudes of athletic training students towards a course addressing psychological issues in rehabilitation. *Journal of Allied Health, 34*, 101-109.

Hausenblas, H., Carron, A., & Mack, D. (1997). Application of theories of reasoned action and planned behavior to exercise behavior: A meta-analysis. *Journal of Sport and Exercise, Psychology*, 19, 36-51.

Heil, J., Bowman, J. J., & Bean, B. (1993). Patient management and the sports medicine team. In J. Heil (Ed.), *Psychology of Sport Injury* (pp. 237-250). Champaign, IL: Human Kinetics Publishing.

Heishman, M. F., & Bunker, L. (1989). Use of mental preparation strategies by international elite female lacrosse players from five countries. *The Sport Psychologist, 3,* 14-22.

Hellstedt, J. C. (1987). Sport psychology at a ski academy: Teaching mental skills to young athletes. *The Sport Psychologist, 1*, 56-68.

Ievleva, L. & Orlick, T. (1991). Mental links to enhance healing. *The Sport Psychologist, 5*, 25-40.

Jensen, S. (1996). *Psychological skills in athletic training: A survey of athletic training curriculum directors*. Unpublished master's thesis: California State University, Fullerton.

Jha, V., Bekker, H., Duffy, S., & Roberts, T. (2007). A systematic review of studies assessing and facilitating attitudes towards professionalism in medicine. *Medical Education*, *41*, 822- 829.

Kerrick, J. S. (1958). The effect of relevant and non-relevant sources on attitude change. *Journal of Social Psychology, 47*, 15-20.

Kindeberg, T., & Christensson, B. (1994). Changing Swedish students' attitudes in relation to the AIDS epidemic. *Health Education Research*, *9*, 171-181.

Krahe, B., & Altwasser, C. (2006). Changing negative attitudes towards persons with disabilities: An experimental intervention. *Journal of Community & Applied Social Psychology*, *16*, 59-69.

Larson, G. A. (1993). *Athletic training and sport psychology: Skills used in athletic training*. Unpublished doctoral dissertation, Boston University.

Larson, G. A., Starkey, C., Zaichkowsky, L. D. (1996). Psychological aspects of athletic injuries as perceived by athletic trainers. *The Sport Psychologist*, *10*, 37-47.

Lavallee, D., Jennings, D., Anderson, A., & Martin, S. B. (2005). Irish athletes' attitudes towards seeking sport psychology consultation. *The Irish Journal of Psychology, 26*, 115-121.

Martin, S. B. (2005). High school and college athletes' attitudes toward sport psychology consulting. *Journal of Applied Sport Psychology, 17*, 127-139.

Martin, S. B. (1998). High schools athletes' attitudes towards sport psychology services. *Journal of Applied Sport Psychology*, *10*, S156.

Martin, S, B., Akers, A., Jackson, A. W., Wrisberg, C. A., Nelson, L., Leslie, P. J., & Leidig, L. (2001). Male and female athletes' and nonathletes' expectations about sport psychology consulting. *Journal of Applied Sport Psychology*, *13*, 18-39.

Martin, S. B., Kellmann, M., Lavallee, D., & Page, S. J. (2002). Development and psychometric evaluation of the sport psychology attitudes- Revised form: A

multiple group investigation. *The Sport Psychologist*, *16*, 272-290.

Martin, S. B., Wrisberg, C. A., Beitel, P. A., & Lounsbury, J. (1997). NCAA division I athletes' attitudes toward seeking sport psychology consultation: The development of an objective instrument. *The Sport Psychologist*, *11*, 201-218.

Moulton, M. A., Molstad, S., & Turner, ,A. (1997). The role of athletic trainers in counseling collegiate athletes. *Journal of Athletic Training, 32*, 148-150.

National Athletic Trainers' Association. (2004). *Role delineation study*. (5th ed.). Dallas: Texas: Author.

Noe, R. (2002). *Employee training and development*. New York: Mc Grawhill

Osgood, C. E., & Tannenbaum, P. H. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review, 62*, 42-55.

Oskamp, S. (1977). *Attitudes and opinion*. Englewood Cliffs, New Jersey: Prentice-Hall

O'Leary, K., & Wilson, G. (1975). *Behavior therapy: Applications and outcome*. New Jersey: Prentice Hall.

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design and analysis: An integrated approach*. Hillside, NJ: Lawrence Erlbaum.

Pero, S. F. (1995). *Development, implementation and evaluation of an educational program in sport psychology for athletic trainers*. Unpublished doctoral dissertation, Temple University.

Pettijohn, T. F. (1989). *Psychology: Concise introduction*. Guilford, CT: Duskin.

Prentice, W. (1991). The athletic trainer. In Mueller, F., Ryan, A. (Eds.). *Prevention of athletic injuries: the role of the sports medicine team*. Philadelphia, PA: Davis.

Ravizza, K. (1988). Gaining entry with athletic personnel for season long consultation.

The Sport Psychologist, *2*, 243-254.

Roeher, G. A. (1961). Significance of public attitudes in rehabilitation of people with disabilities. *Rehabilitation Literature*, *22*, 66-72.

Rokeach, M., & Rothman, G. (1965). The principle of belief congruence and the congruity principle as models of cognitive interaction. *Psychological Review, 72*, 128-142.

Sach, M. L., Sitler, M. R., & Schwille, G. (1993). Assessing and monitoring injuries and psychological characteristics in intercollegiate athletes: A counseling/ prediction model. In D. Pargman (Ed.), *Psychological bases of sport injuries* (pp. 71-84). Morgantown, WV: Fitness Information Technology, Inc

Schell, B., Hunt, J., & Lloyd, C. (1984). An investigation of future market opportunities for sport psychologists. *Journal of Sport Psychology*, *6*, 335-350.

Scherzer, C. (2004). *Training athletic trainers in the delivery of sport psychology rehabilitation interventions*. Unpublished doctoral dissertation, University of Arizona.

Scherzer, C., Brewer, B., Cornelius, A., Van Raalte, J., Petitpas, A., Sklar, J., et al., (2001). Psychological skills and adherence to rehabilitation after reconstruction of the anterior cruciate ligament. *Journal of Sport Rehabilitation, 10,* 165- 172.

Sheedy, J. (1987). Applied sport psychology, the sports trainer and athletic injuries. *Sport Health*, *5*, 21-22.

Silva, III, J. M. (1984). The status of sport psychology: A national survey of coaches. *Journal of Physical Education, Recreation and Dance*, *55*, 46-49.

Smith, A. M., & Milliner, E. K. (1994). Injured athletes and risk of suicide. *Journal of*

Athletic Training, 28, 75-8.

Smith, R. E., & Johnson, J. (1990). An organizational empowerment approach to consultation in professional baseball. *The Sport Psychologist, 4,* 347- 357.

Sullivan, J., & Hodge, K. P. (1991). A survey of coaches and athletes about sport psychology in New Zealand. *The Sport Psychologist*, *5*, 140-151.

Theodorakis, Y., Maliou, P., Papaioannou, A., Beneca, A., Filactakidou, A. (1997). The effect of personal goals, self-efficacy, and self satisfaction on injury rehabilitation. *Journal of Sport Rehabilitation, 5*, 214-223.

Tierney, III, J. E. (1988). *Diffusion of sport psychology ideas and techniques into the elite U.S. swimming community*. Unpublished master's thesis, Southern Illinois University.

Tuffey, S. (1991). The role of athletic trainers in facilitating psychological recovery from athletic injury. *Athletic Training*, *26*, 346-351.

Van Raalte, J. L., Brewer, D. D., Brewer, B. W., & Linder, D. E. (1992). NCAA Division II college football players' perception of an athlete who consults a sport psychologist. *Journal of Sport and Exercise Psychology*, *14*, 273-282.

Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, *53*, 325-337.

Voight, M., & Callaghan, J. (2001). The use of sport psychology services at NCAA Division I universities from 1998-1999. *The Sport Psychologist, 15*, 91-102.

Walk, S. (1992). Peers in pain: The experiences of student athletic trainers. *Sociology of Sport Journal*, *14*, 22-36.

Weiss, M. R., & Troxel, R. K. (1986). Psychology of injured athlete. *Athletic Training,*

21, 104-109, 154.

Wiese, D. M., & Weiss, M. R. (1987). Psychological rehabilitation and physical injury: Implications for the sportsmedicine team. *The Sport Psychologist*, *1*, 318-330.

Wiese, D. M., Weiss, M. R., & Yukelson. (1991). Sport psychology in the training room: A survey of athletic trainers. *The Sport Psychologist, 5*, 15-24.

Wiese-Bjornstal, D. M., & Smith, A. M. (1993). Counseling strategies for enhanced recovery of injured athletes within a team approach. In D. Pargman (ED.), *Psychological bases of sport injuries* (pp. 149-182). Morgantown, WV: Fitness Information Technology.

Wristberg, C. A., & Martin, S. B. (1994). *Attitudes of African-Americans and Caucasian athletes towards sport psychology*. Paper presented at the meeting of the Association for the Advancement of Applied Sport Psychology, Incline Village, NV.

Zakrajsek, R. (2007). *Impact of a tailored intervention on coaches' attitudes and use of sport psychology services*. Unpublished dissertation, West Virginia University.

Zizzi. S. J, & Perna, F. M. (2003). Impact of a brief workshop on stages of change profiles in athletes. Athletic Insight: *Online Journal of Sport Psychology, 5,* (4). Retrieved August 1, 2007, from http://www.athleticinsight.com/Vol5Iss4/Imapctof BroefWorkshop.htm.

Appendix C

Cover Letter

Damien Clement
West Virginia University
School of Physical Education
PO Box 6116
Morgantown, WV 26506-6116

Dear Athletic Training Student,

My name is Damien Clement and I am doctoral student in Sport and Exercise Psychology Program at West Virginia University. I am also a certified athletic trainer. As requirement needed to complete my doctoral studies I need to complete a dissertation. The primary purpose of my dissertation is to assess the effectiveness of a brief educational intervention on the attitudes towards sport psychology of athletic training students.

As an athletic training student, I am asking you to participate in this study. Participation in this study will mean that you will complete a demographic questionnaire, a Sport Psychology Attitudes- Revised form (SPA-R) which assesses attitudes towards sport psychology, a Self Stigma of Seeking Help form (SSOSH) and a sport psychology behaviors form initially. Then either the juniors or seniors will be administered an educational intervention (50-60 minutes). Upon completion of the intervention both groups (juniors and seniors) will once again be administered the SPA-R. One follow up assessments using the SPA-R and the sport psychology behaviors form will be conducted six weeks post intervention (for both groups).

Please do not put your names on any of the forms as your answers will be anonymous. Furthermore, your participation in this study is voluntary and you can feel free to skip any questions or drop out at any time. Your class standing and grades will not be affected by refusal to participate or withdrawal from this study.

Should you have any questions after reading this letter, please feel free to contact Damien Clement at 304-685-7633 or dclement@mix.wvu.edu.

Sincerely,

Damien Clement, M.S., ATC
Doctoral Candidate
Sport and Exercise Psychology
West Virginia University

Appendix D

Informed Consent

You, _____, have been asked to participate in this research study, which will be explained to you by Damien Clement, M.S., ATC. This study is being conducted by Damien Clement in the School of Physical Education at West Virginia University.

This research is being conducted to fulfill the requirements for a doctoral dissertation in Kinesiology with a specialization in Sport and Exercise Psychology in the School of Physical Education at West Virginia University, under the supervision of Andrew Ostrow, Ph.D.

Purposes of the Study

The purpose of this study is to learn more about the attitudes that athletic training students have toward sport psychology. A secondary purpose of the study is to determine the effectiveness a brief educational intervention will have on athletic training students' attitudes toward sport psychology.

Description of Procedures

This study involves the administration of four instruments: a demographic sheet, a Sport Psychology Attitudes-Revised form, a Self Stigma of Seeking Help form and a Sport Psychology Behavior instrument. Participants (juniors and seniors in the Athletic Training Education Programs) will be asked to initially complete all of the instruments. Once completed one of the groups will be dismissed (control group) and the remaining athletic training students will be administered a one hour class on how sport psychology can be integrated into athletic training. Upon completion of this class all participants (juniors and seniors athletic training students) will be administered the SPA-R. A follow-up at six weeks post intervention will be conducted for all participants. At this follow-up both juniors and seniors athletic training students will be asked to complete the SPA-R and the Sport Psychology Behavior instrument.

You do not have to answer all the questions. You will have the opportunity to see the questionnaire before signing this consent form.

Risks and Discomforts

There are no known or expected risks from participating in this study, except for the mild frustration associated with answering the questions.

Benefits

You will be able to gain knowledge about how sport psychology can be incorporated in to athletic training as a result of participation in this study.

Confidentiality

Any information about you that is obtained as a result of your participation in this research will be kept as confidential as legally possible. You will not be asked for any identifying information.

Voluntary Participation

Participation in this study is voluntary. You are free to withdraw your consent to participate in this study at any time.

Refusal to participate or withdrawal will not affect your future care, your status at your institution or your class standing or grades, and will involve no penalty to you.

You will be given an opportunity to ask questions about the research, and also be able to receive answers concerning areas you do not understand.

Upon signing this form, you will receive a copy

I willingly consent to participate in this research.

_____ Signature of Subject or Subject's Legal Representative

_____ Printed Name

Date _____ Time _____

The participant has had the opportunity to have questions addressed. The participant willingly agrees to be in the study.

_____ Signature of Investigator or Co-Investigator

_____ Printed Name

Date _____ Time _____

Appendix E

Sport Psychology Attitudes-Revised Form

Script to be used when delivering the SPA-R

The first instrument in your packet is the SPA-R and was originally designed to assess the attitudes that athletes hold toward sport psychology and sport psychology consulting. I would like you to put yourself in the position as if you were an athlete on any of the athletic teams you have worked with, and use this viewpoint to complete this instrument

Sport Psychology Attitudes - Revised (SPA-R) Form

Please indicate your level of agreement with each of the following statements by circling the response on the **answer sheet** that corresponds to your feelings toward each statement. Please respond to each statement as truthfully as you can.

SD	D	MD	N	MA	A	SA
1	2	3	4	5	6	7
Strongly Disagree	Disagree	Moderately Disagree	Neutral	Moderately Agree	Agree	Strongly Agree

Question	SD	D	MD	N	MA	A	SA
1. A sport psychology consultant can help athletes improve their mental toughness.	1	2	3	4	5	6	7
2. I respect the opinions of people of my own race or ethnicity more than those people from another group.	1	2	3	4	5	6	7
3. If an athlete asked my advice I might recommend that he/she see a sport psychology consultant.	1	2	3	4	5	6	7
4. I would not go to a sport psychology consultant because other athletes would harass me.	1	2	3	4	5	6	7
5. There are certain problems that should not be discussed outside one's immediate family.	1	2	3	4	5	6	7
6. The athletes that I associate most are of the same race or ethnicity as me.	1	2	3	4	5	6	7
7. A good idea for avoiding personal worries and concerns is to keep one's mind on a job.	1	2	3	4	5	6	7
8. To help me better understand myself as an athlete, I would like the assistance of a sport psychology consultant.	1	2	3	4	5	6	7
9. I would feel uneasy going to a sport psychology consultant because some people would disapprove.	1	2	3	4	5	6	7
10. There is something respectable in the attitude of athletes who are willing to cope with their conflicts and fears without resorting to professional help	1	2	3	4	5	6	7
11. There are great differences between people of different race and ethnicity.	1	2	3	4	5	6	7
12. I would feel most secure in receiving help from a sport psychology consultant.	1	2	3	4	5	6	7
13. Having seen a sport psychology consultant is bad for an athlete's reputation.	1	2	3	4	5	6	7

Question	SD	D	MD	N	MA	A	SA
14. There are experiences in my life that I would not discuss with anyone.	1	2	3	4	5	6	7
15. If I was worried or upset about my sport performance, I would want to get help from a sport psychology consultant.	1	2	3	4	5	6	7
16. Emotional difficulties tend to work themselves out in time.	1	2	3	4	5	6	7
17. I think a sport psychology consultant would help me perform better under pressure.	1	2	3	4	5	6	7
18. I would not want someone to know about me receiving help from a sport psychology consultant.	1	2	3	4	5	6	7
19. If I went to a sport psychology consultant, I would not want my coach to know about it.	1	2	3	4	5	6	7
20. A sport psychology consultant could help me fine-tune my sport performance.	1	2	3	4	5	6	7
21. If I went to a sport psychology consultant, I would not want other athletes to know about it.	1	2	3	4	5	6	7
22. At times I have felt lost and would have welcomed professional advice for a personal problem.	1	2	3	4	5	6	7
23. My coach would think less of me if I went to a sport psychology consultant.	1	2	3	4	5	6	7
24. Athletes with a strong character can get over mental conflicts by themselves	1	2	3	4	5	6	7
25. I would be more comfortable with a sport psychology consultant if he/she were the same race or ethnicity as I am.	1	2	3	4	5	6	7

Appendix D

Self Stigma of Seeking Help Scale

Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006)

Please rate your agreement or disagreement with each statement on a 5-point scale ranging from strong disagree (1) to strongly agree (5).

1	2	3	4	5
Strongly disagree				Strongly agree

1. I would feel inadequate if I went to a therapist for psychological help

   1 2 3 4 5

2. My self-confidence would NOT be threatened if I sought professional help.

   1 2 3 4 5

3. Seeking psychological help would make me feel less intelligent.

   1 2 3 4 5

4. My self-esteem would increase if I talked to a therapist.

   1 2 3 4 5

5. My view of myself would not change just because I made the choice to see a therapist.

   1 2 3 4 5

6. It would make me feel inferior to ask a therapist for help

   1 2 3 4 5

7. I would feel okay about myself if I made the choice to seek professional help.

   1 2 3 4 5

8. If I went to a therapist, I would be less satisfied with myself

   1 2 3 4 5

9. My self-confidence would remain the same if I sought help for a problem I could not solve

   1 2 3 4 5

10. I would feel worse about myself if I could not solve my own problems.

    1 2 3 4 5

Appendix F

Sport Psychology Behaviors

SPORT PSYCHOLOGY BEHAVIORS

PART 1: Please answer the following questions by circling the most appropriate response below.

1.	Do you have access to sport psychology services?	YES	NO
2.	Would you be willing to assist a sport psychologist/mental health professional in delivering applied sport psychology services to an injured athlete?	YES	NO

PART 2: Please respond to the following questions by circling the most appropriate number below.

		Not Very Likely					**Very Likely**
3.	How likely is that you will use sport psychology services if they were available?	1	2	3	4	5	6
4.	How likely is it that you would refer an athlete to a sport psychologist if one was available?	1	2	3	4	5	6
5.	How likely is it that you will seek information about sport psychology in relation to your position as an athletic training student?	1	2	3	4	5	6

PART 3: Please answer the following questions by circling the most appropriate response and rating your level of agreement with the statement.

7.	Have you spoken to an athlete about sport psychology?	YES			NO			
7.a	If you answered "YES" how many times?	1	2	3	4	5	6+	
8.	Have you sought out additional information about sport psychology?	YES			NO			
8.a	If you answered "YES" how many times?	1	2	3	4	5	6+	
9.	Have you talked to a sport psychologist/ mental health professional about an athlete?	YES			NO			
9.a	If you answered how "YES" many times?	1	2	3	4	5	6+	
10.	Have you referred an injured athlete to a sport psychologist/ mental health professional?	YES			NO			
10.a	If you answered "YES" how many times?	1	2	3	4	5	6+	
11.	Have you ever used applied sport psychology techniques (goal setting, breathing, relaxation) in your rehabilitation with injured athletes?	YES			NO			
11.a	If you answered "YES" how many times?	1	2	3	4	5	6+	

Appendix G

Demographic Questionnaire

DEMOGRAPHIC INFORMATION

PART 1: Please respond to the following questions by circling/filling in the most appropriate answers below.

1.	**Age in years**:	

2.	**Gender**:	Male	Female

3.	**Year in school**:	Junior	Senior

4.	**Sport that you primarily participated in** (circle one)

Baseball	Golf	Swimming	Volleyball
Basketball	Gymnastics	Tennis	Wrestling
American Football	Softball	Track and Field	Soccer
Baseball	Golf	Swimming	Volleyball

Other:

5.	**Clinical experiences you have had as an athletic training student** (circle all that apply)

Baseball	Golf	Swimming	Volleyball
Basketball	Gymnastics	Tennis	Wrestling
American Football	Softball	Track and Field	Soccer
General Medicine	Sports Medicine Clinic		

Other:

PART 2: Please respond to the following questions by circling the most appropriate answer and rating your level of agreement with the statement.

PREVIOUS EXPERIENCE WITH A SPORT PSYCHOLOGY CONSULTANT/ MENTAL HEALTH PROFESSIONAL

6.	Have you ever worked with a sport psychology consultant/mental health professional on a performance related problem you experienced?	Yes	NO

							Not at all
Very							
6.a	If you answered "Yes" how helpful was the sport psychology consultant/ mental health professional in assisting you? (circle one)	1	2	3	4	5	6

SPORT PSYCHOLOGY EDUCATION (PLEASE INDICATE THE NUMBER OF EACH YOU HAVE PARTICIPATED IN BEFORE THIS SEMESTER AND/OR ARE CURRENTLY PARTICIPATING IN)

7.	General psychology course(s) (circle one)	1	2	3	4	5	6+
8.	General sport psychology course(s) (circle one)	1	2	3	4	5	6+
9.	Course(s) concerning the psychological aspects of athletic injury (circle	1	2	3	4	5	6+

	one)						
10.	Sport psychology workshop(s) (circle one)	1	2	3	4	5	6+

Appendix H

Outline of Educational Intervention

Outline of Brief Education Intervention

I. Introduction
   A. Overview of the study

Ask: What is sport and exercise psychology?
Can sport and exercise psychology be used in Athletic Training? If so how?

II. Sport and Exercise and Athletic Training: They can function collaboratively
   A. Highlight research studies which demonstrate the efficacy of psychological interventions in the rehabilitation context.

Ask: Do you know of any athletic training/sports medicine facility which incorporates sport psychology into their services?

III. Sport and Exercise Psychology and Sport Injury: The Real World
   A. Introduce United States Olympic Committee, Universities, Mayo Clinic and University of Pittsburgh Medical Center as examples where sport psychologists and athletic trainers work collaboratively.

Ask: What issues within rehabilitation do you think sport and exercise psychology can be helpful?

IV. Areas in Rehabilitation sport and exercise psychology that can be helpful
   A. Introduce case study pertaining to confidence
   B. Ask: How can you help individual in the case study believe he can adhere to his rehabilitation program?
   C. Introduce how sport and exercise psychology can be used to maintain confidence during rehabilitation.
   D. Introduce case study pertaining to motivation
   E. Ask: What strategies can you build into the individual's rehabilitation program to help his motivation?
   F. Introduce how sport and exercise psychology can be used to maintain motivation during rehabilitation.
   G. Introduce case study pertaining to anxiety
   H. Ask: What can you do to help reduce anxiety in the case study presented?
   I. Introduce how sport and exercise psychology can be used to reduce anxiety during rehabilitation

V. Introduce basic principles of relaxation
   A. What is relaxation?
   B. How can it be beneficial?
   C. Different methods of relaxation: breathing, passive/progressive relaxation

VI. Introduce basic principles of imagery
   A. What is imagery?
   B. Introduce the different types of imagery that can be helpful during rehabilitation.

VII. Introduce the principle of goal setting
   A. What is goal setting
   B. Introduce how goal setting can be beneficial during rehabilitation.

Make connection with sport psychology and athletic training competencies

VIII. Short discussion about stereotypes and sport psychology
   A. Ask: what is a stereotype?
   B. Ask: what are stereotypes about athletic training students?
   C. Ask: what are stereotypes about sport psychologists?
   D. Ask: what are the stereotypes of working with someone of a different race?
   E. Ask: how are stereotypes hurtful?
   F. Ask: what can you do about it (stereotypes)